

Effect of Received Social Support on  
Battered Women's Commitment to their Abusive Relationships

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**(ABSTRACT)**

This project attempted to understand better the relationship between social support and women's commitment to an abusive relationship for the purpose of informing social support interventions. This study was not an intervention; instead, it sought to examine the processes linking receipt of helpful forms of social support from naturally occurring sources with women's commitment and stay/leave decisions. Specifically, it was hypothesized that relationship satisfaction and quality alternatives would mediate the relationship between received social support types (e.g., nondirective support, positive social exchange, tangible assistance, and directive guidance) and battered women's feelings of commitment. Fifty-one battered women living in domestic violence shelters participated in the present study. Women completed the Revised Conflict Tactics Scale (CTS-2), Inventory of Socially Supportive Behaviors (ISSB), and Investment Model Scale (IMS) along with other measures designed for this study. Results showed that battered women who received more resources and services (i.e., tangible assistance) endorsed lesser commitment to their abusive relationships; however, other dimensions of social support such as showing concern, giving advice, and spending time in recreational activities were unrelated to commitment. Further, neither relationship satisfaction nor quality alternatives mediated the relationship between support and commitment; however, relationship satisfaction and quality alternatives demonstrated expected relationships with women's commitment. Potential design limitations as well as clinical and research implications are discussed.

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Nationally representative studies indicate that approximately 2 to 4 million women are assaulted by their male partners each year in the United States (Browne & Williams, 1993; Straus & Gelles, 1986). In fact, male partners victimize women nearly six times more often than do strangers, and women experience over ten times as many incidents of partner violence as do men (U.S. Department of Justice Bureau Statistics, 1994). Further, medical attention necessary to address women's physical injuries exceeds 3 billion dollars per year (Domestic Violence for Health Care Providers, 1991), and women frequently develop symptoms of depression and post-traumatic stress disorder subsequent to experiencing violence in their intimate relationships (see Jasinski & Williams, 1998, for review). Given its high prevalence rates and negative impact, domestic violence constitutes an important social problem in need of clinical attention and research (U.S. Department of Health and Human Services, 1991).

For the past twenty years, researchers have recognized the importance of understanding this national problem by focusing their research efforts on the predictors of abuse perpetration by domestically violent men and the negative effects of victimization on their female partners (see Feldman & Ridley, 1995; Jasinski & Williams, 1998, for review). Of particular note, researchers have expressed interest in better understanding the content and quality of battered women's support networks because of their possible mitigating and/or protective effects (e.g., Mitchell & Hodsen, 1983). Understandably, studies have shown that battered women frequently do not report the abuse they experience to important others because of their fear of retaliation from the batterer, feelings of embarrassment or humiliation, and/or beliefs that such "family" matters are private concerns (see Miller & Wellford, 1997, for review). In addition, they fear that their supporters will blame them for the abuse by indicating that the women did something to deserve it (Hoff, 1992). Finally, batterers often attempt to control women's disclosure of abuse to others and/or isolate them from persons in their social support networks (Andrews, 1992; Browne, 1987; Dobash, Dobash, & Cavanaugh, 1985;

Mitchell & Hodsen, 1983; 1986). As a result, some battered women may feel as though they must cope with the battering situation on their own, and many of these women likely perceive that their support networks will not be understanding of their current situation (Dobash et al., 1985; Donato & Bowker, 1984; Hoff, 1992). For these various reasons, battered women are generally thought to lack close, supportive relationships with others outside of their abusive relationships, and this lack of support is thought to contribute to the perpetuation of abuse and women's inability to leave their abusive relationships (Frazier, 1997; Rose, Campbell, & Kub, 2000).

While few empirical studies have directly addressed whether increased support affects women's decisions to leave abusive relationships, Horton and Johnson (1993) showed that women who leave report discussing their abuse with someone whereas women who stay do not. Qualitative data suggests that many women who leave indicate that their family and friends were important sources of strength in making that decision (Donato & Bowker, 1984; Dunbar & Jeannechild, 1996). Moreover, recent intervention studies (Sullivan & Bybee, 1999; Sullivan, Campbell, Angelique, Eby, & Davidson, 1994; Sullivan, Tan, Basta, Rumptz, & Williams, 1992; Tan, Basta, Sullivan, & Davidson, 1995) that provided support to women exiting shelters demonstrated differences between experimental and control groups on stay/leave behavior. These studies showed that experimental women who received support and assistance from trained advocates working to increase access to community resources (e.g., employment and child-care) were more effective in ending their relationships if they desired it than were control women.

Because preliminary evidence suggests that helpful forms of social support may be associated with better outcomes for battered women (e.g., Dunbar & Jeannechild, 1996), domestic violence researchers continue to express interest in understanding whether increased social support affects battered women's exposure to violence and feelings of psychological distress (e.g., Sullivan & Bybee, 1999). As mentioned above, researchers who hypothesized that increasing battered women's access

to community resources would improve outcomes (e.g., Sullivan & Bybee, 1999; Sullivan et al., 1994; Sullivan et al., 1992; Tan et al., 1995) randomly assigned battered women exiting domestic violence shelters to an experimental group (i.e., those who received empathy, support and advocacy services) or a control group (i.e., those who did not receive services). Women in the experimental group were assigned to female advocates trained in empathy, active listening, assessment, and problem-solving skills. Advocates' interventions were tailored to meet battered women's self-identified needs, and advocates assisted women for approximately 7-10 hours per week over the course of a ten-week period.

Results demonstrated that, compared to women in the control group, battered women who received advocacy services reported fewer symptoms of depression, greater feelings of life satisfaction, and reduced exposure to violence at 1- and 2-year intervals (Sullivan & Bybee, 1999; Sullivan et al., 1994; Sullivan et al., 1992; Tan et al., 1995). However, intervention effect sizes were small (e.g., ranging from .10 to .28), suggesting a need to better understand the processes that link social support to outcomes (e.g., Sarason, Pierce, & Sarason, 1994). But because domestic violence researchers have not theoretically linked the content of their interventions to outcomes (e.g., Sullivan & Bybee, 1999), little is known about such processes. Therefore, additional studies are needed to understand the processes linking support to outcomes for the purpose of improving social support interventions.

*Received Social Support.* In recent years, social support researchers have attempted to understand support processes by examining individuals' received social support (e.g., Sarason et al., 1994). According to social support researchers, received social support is defined as "the diversity of helping behaviors that individuals actually receive when they are provided with assistance" (Barrera, Sandler, & Ramsey, 1981, p. 437). In other words, received social support is thought to capture the *actual* support received as opposed to the support *perceived* to be available (Sarason et al., 1994).

Factor analytic studies have suggested that received support is comprised of at least four subtypes (e.g., Stokes & Wilson, 1984), namely directive guidance (i.e., advice, information, feedback), nondirective support (i.e., feelings of closeness/intimacy/acceptance, comfort, esteem building), positive social exchange (i.e., time spent in leisure and recreational activities), and tangible assistance (i.e., provision of material resources and services) (Cohen & Wills, 1985; Finch et al., 1997; Stokes & Wilson, 1984).

Sullivan and Bybee's intervention (1999) study discussed earlier utilized supportive behaviors comparable to the received support behaviors listed above. For example, advocates informed and advised women (i.e., directive guidance) about available community resources and generated safety plans. Such assistance likely enhanced women's own problem-solving abilities and/or improved their access to community services. Advocates also provided empathy and worked on establishing rapport and closeness to women (i.e., nondirective support) in the early stages of the intervention. By providing empathy and comfort, advocates likely decreased women's feelings of psychological distress and mobilized them to take action. Similarly, advocates who spent time in leisure or recreational activities (i.e., positive social exchange) may have temporarily relieved women's feelings of psychological distress and/or removed them from a potentially violent situation. Further, advocates who provided material resources or services (i.e., tangible assistance) likely increased women's self-efficacy for escaping their partners' violence and/or provided them with the resources they required to live independently.

Based on Sullivan and Bybee's intervention, it may be that women's receipt of social support may reduce their distress, increase self-efficacy and/or protect them against future episodes of violence. Moreover, these intervention studies that provided advocacy to women exiting shelters (i.e., Sullivan & Bybee, 1999) experimentally manipulated the amount of social support women received. That is,

these studies provided women with increased levels of received support for 10-weeks following their shelter stay for the purpose of reducing their distress and exposure to future episodes of violence.

Yet, as noted earlier, intervention researchers have not theoretically linked the content of their intervention to outcomes; therefore, the processes that may explain how social support affects distress and exposure to violence is unclear. It may be that, by providing women with increased amounts of received support, women feel more empowered, less dependent or committed to their partners, making them more inclined to leave their relationships. Perhaps through reduced commitment and leaving, battered women become less vulnerable to future episodes of violence and feel less psychologically distressed. In fact, research has shown that women who returned to their abusive partners following a shelter stay were more likely to experience physical and psychological abuse compared with women who left their abusive partners (Tan et al., 1995), suggesting that women who return may be at greater risk for future battering.

It is for this reason that much of the early clinical research that focused on helping battered women examined their stay/leave decisions (Strube, 1988). Researchers generally thought that, for the purpose of designing treatment interventions (i.e., improving outcomes), it was important to identify the factors that distinguished battered women who remained in their relationships from those who left. If researchers could identify and understand the implications of those factors, it was thought that they could develop strategies designed to facilitate the process of leaving.

*Relationship Commitment.* In a review of the factors associated with battered women's stay/leave decisions, Strube (1988) identified a number of theoretical models that may explain the processes by which battered women leave their abusive relationships. For example, the theory of *psychological entrapment* (Brockner & Rubin, 1985) suggests that women escalate their commitment to abusive relationships, even though they continue to experience abuse, in order to justify their prior attempts to make the relationship work (Strube, 1988). In contrast, *learned helplessness* theory (Seligman, 1975)

states that battered women who experience noncontingencies between their responses (e.g., escalated commitment) and outcomes (i.e., continued abuse) expect that their future responses and outcomes will also be unrelated. As a result of their expectations, women develop deficits in motivation, cognition, affect and behavior that prevent them from leaving (Strube, 1988; Walker, 1983).

According to the *reasoned action/planned behavior* theory (Fishbein & Ajzen, 1975), battered women leave if they believe that their lives will improve by leaving; if they perceive that leaving will produce positive outcomes; and/or if significant others encourage their leaving (Strube, 1988).

Although each of these theories can be conceptually applied to battered women's stay/leave decisions, one in particular, the Investment Model (Rusbult, 1980) accounts for the most data on stay/leave decisions (Rhatigan & Axsom, 2000). Specifically, this model theorizes that an individual's commitment level predicts his/her relationship status. The Investment Model emerged from Interdependence Theory (Thibaut & Kelley, 1959), which asserts that an analysis of the interdependent processes within relationships provides more information about the stability of relationships than does an analysis of personal dispositions or characteristics (Rusbult, Martz & Agnew, 1998). In the case of battered women, the Investment Model posits that women likely become dependent on their intimate relationships to the extent that important needs cannot be met successfully without them. That is, their decision to stay or leave is contingent on the interdependent dynamics within their relationships rather than the dispositions of the women themselves. According to the theory, dependence on a relationship develops as a result of three separate and unique processes. Battered women's feelings of dependence may initially develop as a consequence of their feelings of satisfaction for their relationships. More specifically, relationship satisfaction (SAT) is conceptualized as a function of the rewards and costs associated with the relationship. To the extent that a woman's partner fulfills her most important needs without significant costs, she should theoretically feel satisfied with that relationship.

In addition, battered women's dependence on their relationships develops via women's perception of available alternatives. Quality of available alternatives (ALT) is conceptualized in the same fashion as satisfaction; it is a function of the perceived rewards and costs associated with an alternative relationship. If other people (or the woman herself) cannot fulfill the woman's most important needs, then theoretically she should perceive the quality of her alternatives to be poor. Next, battered women's dependence on their relationships develops as a consequence of their investments (INV). This refers to the magnitude and importance of psychological and material resources bound to a relationship that may be lost if the relationship were to end. Specifically, time, energy, and effort are examples of psychological resources, and shared property and children are examples of material resources, that may be lost if the relationship were to end. As battered women's relationships develop, women likely invest many resources in the hopes of maintaining or improving them. Like relationship satisfaction (SAT) and quality alternatives (ALT), investments (INV) that become tied to relationships likely increase battered women's feelings of dependence over time.

The Investment Model also postulates that feelings of commitment (COM) develop as dependence increases. Commitment is defined as battered women's psychological and behavioral attachment and long-term orientation to their relationships. According to the Investment Model, commitment level is thought to mediate the relationship between the factors that influence relationship dependence (i.e., SAT, ALT, INV) and stay/leave decisions. Thus, the overall model is represented by the following equation:  $COM = SAT - ALT + INV$ . That is, battered women who feel relatively satisfied, possess lower quality alternatives, and have more invested, are likely to feel strongly committed to their relationships. In turn, women who endorse higher levels of commitment should be more likely to stay in their abusive relationships.

Although this model has largely been tested on nonabusive couples, two studies have examined it among abused populations. Rusbult and Martz (1995) in their study of "nonvoluntary dependence"

found that feelings of commitment were greater among shelter women who had poorer quality economic alternatives (e.g., unemployed), higher satisfaction (e.g., positive feelings for the partner), and greater investments (e.g., longer relationships and being married). Moreover, battered women's feelings of commitment were shown to predict their stay/leave decisions at 3-month, 6-month and 1-year follow-ups. Street, Lam, and Riggs (1999) similarly found that the Investment Model accounted for approximately 41% of the variance in intentions to leave an abusive dating partner among college females.

In addition to being related to battered women's commitment and stay/leave decisions, the Investment Model provides a theoretical foundation for linking social support to improved outcomes. Perhaps social support lowers women's commitment to their abusive relationships causing them to leave which, in turn, reduces their exposure to future episodes of violence and their feelings of psychological distress. Unfortunately, relationships among received social support and battered women's commitment have not been empirically examined. Several studies (e.g., Dunbar & Jeannechild, 1996), noted earlier, have suggested that social support and stay leave decisions may be related, but that data is limited. Moreover, another study that measured battered women's social support networks and their stay/leave decisions (Frazier, 1997) showed that women who did not return to their abusive partners following a shelter stay possessed the same number of supporters in their support networks as those who returned. Although this finding seemingly contradicts prior research (e.g., Horton & Johnson, 1993), one explanation for this study's null results may be that support network members provided women with unhelpful as opposed to helpful forms of social support (i.e., received support). This explanation is supported by research, which has shown that measures of network size and measures of received social support commonly demonstrate very modest associations (Sarason & Sarason, 1994). This suggests that network size may be less critical for improving battered women's outcomes than the amount and/or type of support received.

Taken together, current research has not definitively demonstrated an empirical relationship between social support and commitment, but conceptually, it makes sense that they may be related, particularly among battered women. Moreover, the Investment Model provides a theoretical framework for explaining the mediational processes by which social support may affect battered women's commitment. For example, advice and guidance (i.e., directive guidance) may reduce women's feelings of relationship satisfaction (SAT) by encouraging women to perceive that physical and psychological abuse is an extreme cost of being in an intimate relationship. As women perceive that the costs of their relationships outweigh the rewards, they are likely to feel less satisfied and less committed. In addition, advice and guidance may help women access important resources that are necessary to reducing women's dependence (e.g., child care). If important needs can be fulfilled outside women's abusive relationships, then women may feel less dependent and less committed. Additionally, expressing feelings of acceptance and comfort (i.e., nondirective support) may affect women's perceptions of quality alternatives (ALT) by communicating that certain important needs may be better fulfilled outside women's abusive relationships. Similarly, spending time with women in leisure or recreational pursuits (i.e., positive social exchange) may improve women's perception of alternatives (ALT). Finally, providing women with resources and services may increase their perception of quality alternatives (ALT) by demonstrating to women that important resources may be secured outside of their abusive relationships.

*Purpose and hypotheses.* The purpose of the current project was to examine theoretically and empirically the processes linking social support to battered women's outcomes. The Investment Model suggested that, by influencing battered women's commitment levels and their stay/leave decisions, received social support might indirectly reduce the violence and distress women experience. To date, the effects of social support on battered women's commitment level and stay/leave decisions have not been tested. To address this important area of research, this study focused on several major

research questions. First, it examined whether social support related to commitment and stay/leave decisions among battered women. Next, it examined whether social support related to Investment Model variables. Then, it replicated prior research demonstrating relationships among Investment Model variables and battered women's commitment (i.e., Rusbult & Martz, 1995). And finally, it determined whether the Investment Model mediated the relationship between social support and battered women's commitment. By integrating theory and research on social support with theory and research on commitment, this study begins to address the processes linking support behaviors to beneficial outcomes for battered women. The present study was not an intervention study, however. It was designed to examine the support battered women living in shelters typically received from informal (e.g., friends and family) and formal (e.g., shelter workers) sources. Although this design difference reduces the compatibility between the present study and current intervention studies, the present study represents a preliminary investigation of the relations between social support and battered women's commitment. To examine the relationships among received social support types, Investment model factors and commitment, the following sets of hypotheses were tested:

Relationship satisfaction (SAT) and quality alternatives (ALT) would mediate the relationship between received social support types (e.g., nondirective support, positive social exchange, tangible assistance, and directive guidance) and battered women's feelings of commitment (COM). These relationships are described in detail below:

1. The relationship between nondirective support and commitment would be mediated by quality alternatives.
  - a. Nondirective support would be inversely related to commitment (COM).
  - b. Nondirective support would be positively related to quality alternatives (ALT).
  - c. Quality alternatives would be inversely related to commitment (COM).
  - d. When quality alternatives (ALT) was statistically controlled, the relationship between nondirective support and commitment would diminish in strength.
2. The relationship between positive social exchange and commitment would be mediated by quality alternatives.
  - a. Positive social exchange would be inversely related to commitment (COM).
  - b. Positive social exchange would be positively related to quality alternatives (ALT).
  - c. Quality alternatives would be inversely related to commitment (COM).

- d. When quality alternatives (ALT) was statistically controlled, the relationship between positive social exchange and commitment would diminish in strength.
3. The relationship between tangible assistance and commitment would be mediated by quality alternatives.
    - a. Tangible assistance would be inversely related to commitment (COM).
    - b. Tangible assistance would be positively related to quality alternatives (ALT).
    - c. Quality alternatives would be inversely related to commitment (COM).
    - d. When quality alternatives (ALT) was statistically controlled, the relationship between tangible assistance and commitment would diminish in strength.
  4. The relationship between directive guidance and commitment would be mediated by quality alternatives and relationship satisfaction.
    - a. Directive guidance would be inversely related to commitment (COM).
    - b. Directive guidance would be positively related to quality alternatives (ALT).
    - c. Directive guidance would be inversely related to relationship satisfaction (SAT).
    - d. Quality alternatives would be inversely related to commitment (COM).
    - e. Relationship satisfaction would be positively related to commitment (COM).
    - f. When quality alternatives (ALT) and relationship satisfaction (SAT) were statistically controlled, the relationship between directive guidance and commitment would diminish in strength.

### Supplementary Hypotheses

In addition to the main hypotheses noted above, several other hypotheses were tested. These hypotheses aimed to replicate prior work relating the Investment Model to stay/leave decisions (Rusbult & Martz, 1995) and to explore relationships among variables such as women's exposure to abuse, their feelings of support satisfaction, their supporters' intentions, and their experiences with victim-blame and avoidance.

*Investment Model.* As discussed earlier, Rusbult and Martz (1995) in their study of "nonvoluntary dependence" showed that battered women's level of commitment partially mediated the relationship between Investment Model factors and stay/leave decisions at 3-month, 6-month and 1-year follow-ups. This study attempted to replicate these findings within a similar sample. That is, this study hypothesized that battered women who reported lower levels of relationship satisfaction (SAT), higher levels of quality alternatives (ALT), and fewer investments (INV) would endorse lesser commitment (COM) to their abusive relationships. Women's commitment levels should predict their

intentions to stay or leave their abusive relationships upon exiting the shelter, and commitment (COM) should mediate the relationship between Investment Model factors and stay/leave decisions.

Exposure to Abuse. Rusbult and Martz (1995) postulated that battered women's exposure to abuse was likely related to their feelings of relationship satisfaction (SAT). As relationship satisfaction is currently defined and operationalized (Rusbult, 1980), battered women should theoretically feel satisfied to the extent that the rewards associated with their relationships outweigh the costs. More than likely, most battered women living in shelters perceive that abuse is an extreme cost associated with their relationships, which should theoretically reduce their feelings of relationship satisfaction and commitment. Therefore, it was hypothesized that as women's exposure to abuse increased, their feelings of satisfaction and commitment would decrease.

Support Satisfaction. Prior research on social support has also demonstrated the importance of an individual's satisfaction for support he/she receives as it has been shown to be related to improved health outcomes, such as reduced psychological distress (see Sarason & Sarason, 1994, for review). It is conceivable that, irrespective of the amount of support an individual receives, he/she may or may not be satisfied with that support. Therefore, it seems likely that women's feelings of satisfaction for support moderated the relationship between received support behaviors and women's commitment levels (COM). That is, the relationship between received support and commitment (COM) might be different for women who reported feeling satisfied with supporter behaviors versus women who reported feeling dissatisfied.

Supporter Intentions. Further, it seems likely that the advice, information and feedback (i.e., directive guidance) provided to women by their supporters could differentially affect their commitment levels. For example, some supporters may advise battered women to file a restraining order or encourage them to recognize abuse as an extreme cost associated with their relationships. In both cases, women's commitment levels (COM) likely diminish to the extent that their supporters' advice

and guidance encouraged the women to feel less dependent and less satisfied. In contrast, some supporters may advise battered women to attend couple's counseling for the sake of preserving their relationships or may provide feedback that they should "stay out of [their partners'] way" or "don't argue with [them]." Such advice may encourage continued dependence and increased feelings of commitment. Therefore, it was also hypothesized that women's perceptions of their supporters' advice would moderate the relationship between directive guidance and commitment. That is, the relationship between directive guidance and commitment might be different for women whose supporters encouraged them to leave their relationships versus women whose supporters encouraged them to reconcile and return to their partners. For women whose supporters encouraged them to leave their relationships, results might show an inverse association between directive guidance and commitment (COM). For women whose supporters encourage them to reconcile and return to their relationships, results might show a positive association between directive guidance and commitment (COM).

*Victim-Blame and Avoidance.* Earlier studies on the responses of battered women's support networks indicated that many avoid or blame them for the abuse (e.g., Mitchell & Hodsen, 1983). According to Janoff-Bulman (1992), supporters may feel discomfort and blame toward battered women when supporters have not experienced similar misfortunes. Janoff-Bulman (1992) believes that the reason some supporters blame and/or avoid is because as non-victims they frequently believe "in a benevolent, meaningful universe in which they are worthy, competent individuals who can control what happens to them, and these core beliefs provide them with a sense of invulnerability, (p.147)." In fact, victim-blaming frequently occurs when supporters overly rely on hindsight bias which precludes them from seeing the situation through the victim's eyes (Janoff-Bulman, 1992). In other words, supporters benefit from knowing how the event turned out and will use that knowledge to suggest that the woman could have done something differently (Janoff-Bulman, 1992). When abuse

is repeated and battered women are not capable of leaving or taking more dramatic steps to ending the abuse, some supporters may feel increasingly frustrated. Their past history with the victim's abuse experiences is likely to reinforce their belief system that she must have done something to cause her problems, and even if she didn't, she shouldn't remain in the relationship any longer. Perhaps supporters' feelings of frustration in combination with the woman's inability to end the abuse cause some supporters to avoid the situation altogether.

Therefore, victim-blaming and avoidance responses from supporters are also likely to affect women's commitment level; however, in this case, such responses should increase women's commitment and dependency to the extent that it further "traps" them in their relationships. For example, victim-blaming may reinforce the belief that the abuse can be controlled by encouraging the woman to feel as though her behavior caused the event to occur. Indeed, self-blaming attributions have been shown to reduce a woman's likelihood of leaving (Andrews & Brewin, 1990) and increase her relationship satisfaction (SAT) and commitment level (COM) (Rusbult & Martz, 1995). Additionally, avoidance responses from supporters may decrease a woman's perception of quality alternatives (ALT) because she literally has no one outside her abusive relationship available to fulfill her most important needs. This response likely makes battered women feel more dependent and committed.

## Method

### Participants

Sixty-nine participants were recruited via battered women's service organizations in the central North Carolina area (e.g., Raleigh, Durham, Pittsboro). All women seeking services from organizations or local shelters qualified for participation if they experienced abuse by an intimate partner within the past year and resided within a domestic violence shelter. Women were solicited for their participation through shelter staff. All women who were approached by staff agreed to

participate in this study; however, some of the women who were approached did not meet necessary inclusion criteria (n=14). Four additional women were eliminated because: (1) they did not speak English and could not complete questionnaires as written (n=2); or (2) they had a learning disability that interfered with their ability to complete questionnaires (n=2). Thus, a total of 51 participants constituted the study sample.

### Procedure

During solicitation, staff members explained to women that a graduate student interested in domestic violence research was conducting a study titled, “Perceptions of Social Support among Women Living in Shelters” and needed women to complete surveys. Women were told that surveys contained 130 questions designed to assess their experiences with abuse, their experiences with social support, and their thoughts and feelings about their partners. Women were also told that they would receive \$10 for their participation.

The primary investigator supervised all sessions with participants. Once women qualified and agreed to participate, a time for their completion of questionnaires was arranged. At that time, the purpose of the study was briefly explained. Women were told that researchers were interested in better understanding how women’s experiences with their supporters affected their current situation. Women completed surveys in small groups ( $n \leq 4$ ) and were instructed not to talk with one another during testing. Once the purpose and general procedures were described, women were asked to complete consent forms. Participants were provided with standardized instructions on the completion of measures, which included, in order, a demographic questionnaire, the Revised Conflict Tactics Scale (CTS-2), Inventory of Socially Supportive Behaviors (ISSB), ISSB Addendum, the Victim-Blame and Avoidance Scale (VBAS), and the Investment Model Scale.

Upon completion of the questionnaires, participants were taken aside individually and asked whether they had any questions or concerns about the project. Further, they were asked informally

about their thoughts or reactions to surveys in order to determine their distress levels and/or their understanding of the intent behind survey questions. Then, women were debriefed on the purpose and primary goals of the project. They were asked whether they were interested in receiving general results from the study through their local domestic violence organizations, and they were thanked and paid ten dollars.

### Measures

*Demographic questionnaire.* A demographic questionnaire was completed that assessed age, ethnicity, religion, educational attainment, employment status, self and partner income, and number of children. Additional demographic questions were created for the purpose of this study to assess the current status of women's relationships (e.g., dating, married/cohabitating, separated, or divorced), length of stay in the shelter, and alternate sources of potential support (e.g., therapists outside of shelter).

*Exposure to Abuse.* The Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) contains 39 items that assess conflict resolution behaviors enacted by either women's partners or themselves. Women completed items that assessed their partners' enactment of conflict resolution behaviors. The CTS2 is an improved version of the original CTS (Straus, 1979) and includes new items measuring partners' use of negotiation, sexual coercion, and injury as well as modified items measuring psychological and physical aggression. The internal consistency of the CTS2 scales ranged from .79 to .95 in preliminary scale testing (Straus, et al., 1996), and internal consistency of the CTS2 scales within this study ranged from .72 to .94.

CTS2 items are divided into five categories of conflict resolution. Specifically, six items measure partner's negotiation behaviors categorized as either emotional (e.g., "my partner showing care even though we disagreed") or cognitive (e.g., "my partner agreed to try a solution to a disagreement that I suggested"). Eight items measure partner's psychological aggression categorized as either minor

(e.g., “insulted or swore at me”) or severe (e.g., “threatened to hit or throw something at me”).

Twelve items measure partner’s physical assault categorized as either minor (e.g., “pushed or shoved me”) or severe (e.g., “used a knife or gun on me”). Seven items measure partner’s sexual coercion categorized as either minor (e.g., “made me have sex without a condom”) or severe (e.g., “used force [like hitting, holding down, or using a weapon] to make me have sex”). Finally, six items measure partner’s perpetration of injury categorized as either minor (e.g., “had a sprain, bruise, or small cut because of a fight with my partner”) or severe (e.g., “had a broken bone from a fight with my partner”). Respondents indicated how frequently their partners engaged in the above conflict resolution behaviors within the past year by circling a response category, ranging from 0 “this has never happened” to 6 “more than 20 times in the past year.” Although items could potentially be differentially categorized (e.g., minor or severe), the CTS2 weighs all items equally. Thus, it measures the frequency of conflict resolution behaviors, not their intensity or severity.

To derive estimates of the frequency of behaviors, Straus and colleagues (1996) recommend using the following strategy. First, a frequency number is obtained based on the six response categories. For some categories, there is no frequency range (i.e., categories 0, 1, 2). However, for categories 3 thru 6, Straus and colleagues (1996) recommend using midpoints of the frequency range. For example, for category 3 (3-5 times) the midpoint is 4, for category 4 (6-10 times) the midpoint is 8, for category 5 (11-20 times) it is 15, and for category 6 (more than 20 times), the midpoint of 25 is recommended. In addition, respondents may circle 7 “not in the past year, but it did happen before” which is scored as 1 (yes). For each individual item, a frequency score is obtained. Then, items within a particular subscale are summed together to create a subscale score. For example, frequency scores for the eight items that measure psychological aggression are added together to comprise a total psychological aggression score which can range from 0 to 200. Higher scores indicate greater frequency across multiple forms of partner abuse.

Received Support. The Inventory of Socially Supportive Behaviors (ISSB; Barrera et al., 1981) contains 34 specific behaviors that are considered examples of received social support. Among the 34 behaviors, factor analyses have demonstrated four empirically distinct subscales, namely directive guidance (e.g., “Gave you some information on how to do something”), nondirective support (e.g., “Told you that he/she feels very close to you”), positive social exchange (e.g., “Participated in some activity with you to help you get your mind off things”), and tangible assistance (e.g., “Gave you over \$25”) (Stokes & Wilson, 1984). Respondents indicated how frequently people such as their family members, friends, coworkers, neighbors, or shelter staff with whom they talked about their abusive relationship provided them with support during the past month (0=not at all; 1=once or twice; 2=about once a week; 3=several times a week; 4=about every day). Items within each subscale are totaled, and higher scores indicate greater frequency of received support behaviors within the past month.

Additional research has shown differential empirical relationships between ISSB subscales and measures of depression and life satisfaction (Finch et al., 1997). For example, tangible assistance and directive guidance demonstrated significant positive associations with depression whereas positive social exchange showed an opposing association (Finch et al., 1997). The internal consistency of subscales within this study ranged from .73 for tangible assistance to .93 for directive guidance. Also, correlations among ISSB subscales were moderate to high and were slightly higher than those found in scale testing research (e.g., Finch et al., 1997). As can be seen in Table 1, positive social exchange and nondirective support were the most highly intercorrelated ( $r = .83, p < .01$ ), suggesting that the two subscales may not be empirically distinct within this sample. As a result, these two subscales were collapsed together.

Satisfaction with Support. (ISSB Addendum) Four questions, one for each type of received support, were created for this study. The questions were designed to assess women’s feelings of satisfaction with received social support. For example, satisfaction for nondirective support was

assessed as follows: “Each of the questions just asked is designed to measure whether you feel as though your supporters value your worth despite any faults you may have. How satisfied are you with your supporters’ communication of that message?” Respondents indicated their feelings of satisfaction on a 6-point scale (1=very dissatisfied to 6=very satisfied). Similar questions assessed women’s feelings of satisfaction for the three other types of received social support. Because nondirective support and positive social exchange subscales on the ISSB were collapsed due to high intercorrelation, satisfaction items for nondirective support and positive social exchange were collapsed as well. Moreover, the internal consistency of all items (i.e., directive guidance satisfaction, collapsed scale, and tangible assistance) was .89. Therefore, this measure, although intended to measure separate constructs, was determined to measure the same construct, namely satisfaction across all dimensions of received support.

*Supporters’ Intentions.* (ISSB Addendum) One question designed to assess the direction of supporters’ advice and guidance was created for this study. It read, “Think about the specific words of advice your supporters have given you. Would you say that their advice has generally encouraged you to work toward maintaining your relationship or terminating it?” Respondents indicated their supporter’s intentions on a 5-point scale (1=mostly maintaining to 5=mostly terminating).

*Victim-Blame and Avoidance Scale.* (VBAS) This 14-item inventory assesses the frequency with which women experienced accusatory, blaming, and/or avoidance behaviors from their support systems in response to the abuse they experience. The VBAS was created for this study and contains two conceptually-based subscales: seven items that measure victim-blame (e.g., “criticized or lectured me”), and seven items that measure avoidance (e.g., “acted as though nothing ever happened”). Items were created by the primary investigator and are based on Janoff-Bulman’s (1992) research on the responses of non-victims to victims of interpersonal violence. As with the ISSB, respondents

indicated how frequently others blamed or avoided them during the past month (0=not at all to 4=about every day). Higher scores indicate greater frequency of victim-blame or avoidance behaviors.

Results from this study demonstrated high internal consistency within subscales (Cronbach's alpha for victim-blame = .89, Cronbach's alpha for avoidance =.93), and moderate to high correlation between subscales ( $r = .76, p < .01$ ). As a result of the high interrelationship between subscales, they were collapsed together (see Table 1).

*The Investment Model Scale.* (IMS; Rusbult et al., 1998) This 29-item inventory is designed to measure four constructs within the investment model, namely commitment level, relationship satisfaction, quality of alternatives, and investment size. Examples include: "I want our relationship to last for a very long time" (i.e., commitment level), "Our relationship is close to ideal" (i.e., relationship satisfaction), "If I weren't dating/married to my partner, I would find someone else" (i.e., alternative quality), and "I have put a great deal into our relationship that I would lose" (i.e., investment size). Preliminary analyses of the IMS suggest good internal consistency with alphas ranging from .82 to .95, and it has demonstrated good convergent and discriminant validity as evidenced by strong empirical relationships with marital/dyadic adjustment measures and weak empirical relationships with personal disposition measures (Rusbult et al., 1998). Cronbach's alphas for this administration of the IMS were .90 (SAT), .88 (ALT), .85 (INV), and .88 (COM). Responses range from 0 (not at all) to 8 (completely) for each item. Higher scores indicate greater levels of commitment, relationship satisfaction, quality alternatives, and investment.

*Stay/Leave Decisions.* One question designed to assess women's decisions to stay or leave was created for this study. It read, "Based on your thoughts or feelings right now, what do you think you will do once you leave the shelter? Will you return to your partner or work toward separation and divorce?" Respondents indicated whether they intended to return to their partners (scored as 0) or work toward separation and divorce (scored as 1).

## Results

### Descriptive Analyses

*Demographic Information.* As Table 2 indicates, the 51 women in this sample were 33 years of age on average, were Caucasian (45%) or African-American (47%), mainly identified with different denominations of the Christian faith (65.3%), and had an average of 2.5 children. The majority of women attained a high school education with some additional course work in either college or technical school (56.9%); yet, a large percentage (36%) reported that they completed less than a high school education. At the time of data collection, most women were unemployed (76.5%) making less than \$100 per week; however, a number of women mentioned that they struggled to answer this question because they were forced to leave their jobs in order to escape their partners' violence. Therefore, data on women's current employment status should not be construed as an indication of chronic unemployment. Women's partners typically earned a higher weekly income than did women, with most partners making between \$201-\$400 per week (41.3%). Many women reported that they were either single (37.3%) or separated (35.3%). Further, they noted that their relationships were long-standing, lasting 6 years on average ( $M=6.0$ ,  $SD=4.83$ ). Finally, even though women reported residing within a domestic violence shelter for an average of one month, their time spent in the shelter varied widely, from as little as 0 (not even one full day) to as much as 180 days (see Figure 1).

*Exposure to Abuse.* In general, women endorsed high rates of partner abuse (see Table 3). They reported that, within the past year, their partners engaged in an average of 106 psychologically aggressive behaviors, with women's psychological aggression subscale scores ranging widely from as little as 13 behaviors to as much as 200 behaviors. In contrast, college age females in scale testing research (Straus et al., 1996) reported that their partners perpetrated 15.1 psychologically aggressive behaviors against them. Battered women also noted that, within the past year, their partners physically assaulted them an average of 100 times (college females'  $M= 9.3$ ), ranging from 0 to 290 times which

resulted in injury an average of 33 times (college females'  $M=6.2$ ). However, as evidenced by median scores (median=27), women tended to report fewer than 33 injuries on average. Further, women stated that their partners sexually coerced them an average of 47 times within the past year (college females'  $M=11.8$ ) ranging from 0 to 150 times. In contrast, women noted that, within the past year, their partners negotiated disagreements with them an average of 51 times (college females'  $M=67.1$ ) ranging from as little as 0 to as much as 130 times. Taken together, women's scores on the CTS2 ranged widely across all subscales and demonstrated very high rates of partner abuse relative to a college-age sample. Unfortunately, no normative data for this measure exists among battered women, either those living in or outside shelters.

*Received Support.* In contrast to the high levels of abuse women reported, they obtained small to moderate amounts of received support as evidenced by their mean scores across ISSB subscales (see Table 3). Collectively, women indicated that they received social support behaviors about one time per week on average from their support systems which included women's friends and family members as well as shelter staff and residents. Specifically, women reported that their supporters helped them define, understand, and cope with their abusive relationship (i.e., directive guidance) somewhat less than one time per week within the past month. Similarly, women stated that they felt as though their supporters valued their worth despite any faults they might have and spent time with them in leisure and recreational activities (i.e., collapsed nondirective support and positive social exchange subscales) approximately one time per week within the past month. In contrast, women indicated that their supporters provided them with financial aid, material resources, and needed services (i.e., tangible assistance) approximately once or twice within the past month. Furthermore, relative to 1,007 college-age students in scale testing research (Finch et al., 1997), women in this sample reported lesser directive guidance ( $M=23.5$  vs.  $M=30.5$ ), nondirective support ( $M=10.2$  vs.  $M=14.5$ ), positive social

exchange ( $M=12.3$  vs.  $M=16.0$ ), and tangible assistance ( $M=12.5$  vs.  $M=14.3$ ). Like the CTS2, no normative data on this measure exists for battered women, either those living in or outside shelters.

However, it should be noted that some of the battered women had not had contact with a significant number of their supporters subsequent to the women entering the shelter. This measure specifically requires women to report their receipt of social support within the past month, and for some, they had not had contact with informal sources of social support (e.g., friends and family) during the specified time period. Therefore, received support scores may not be an accurate representation of the amount of support battered women commonly receive from their informal sources of support.

*Satisfaction with Support.* In general, women reported feeling satisfied with the support they received as evidenced by their average item score of 4.2 on a 6-point scale (see Table 3).

*Supporter Intentions.* In addition, women reported that their supporters generally encouraged them to work toward ending their abusive relationships as evidenced by their mean score of nearly 4 on a 5-point scale ( $M=3.8$ ,  $SD=1.22$ ).

*Victim-Blame and Avoidance.* In general, women reported that they received fewer unsupportive behaviors from their support systems (i.e., blaming or avoidance) than supportive behaviors (see Table 3). In order to compare the victim-blame and avoidance (VBAS) and received support (ISSB) measures more closely, a direct statistical comparison was performed. Comparing women's scores across measures, a repeated measures ANOVA demonstrated that women received different levels of supportive and nonsupportive behaviors,  $F(3,48) = 21.46$ ,  $p < .001$ . Post-hoc Bonferroni tests showed that women received more directive guidance and nondirective support/positive social exchange than tangible assistance or blame/avoidance. Specifically, women's supporters engaged in supportive behaviors approximately one time per week (with the exception of tangible assistance) whereas their supporters blamed and avoided the women somewhat less than once or twice within the past month.

However, it should be noted that, anecdotally, women commonly stated that their supporters blamed and avoided them more than once or twice per month prior to their stay in the shelter. Moreover, women's lower scores on the blame/avoidance measure is understandable considering their current living arrangements.

*Investment Model Scale.* As a group, women reported very low levels of relationship satisfaction and commitment in conjunction with moderate levels of quality alternatives and investments as evidenced by low to mid-level scores on the IMS measure (see Table 3). Nearly all women stated that they were not at all satisfied with their abusive relationships ( $M=5.2$ ,  $SD=8.26$ ), and they reported being only slightly attached or committed to their abusive relationships ( $M=15.1$ ,  $SD=15.55$ ). Women also indicated that they somewhat agreed with the idea that there were attractive alternatives available to them ( $M=19.6$ ,  $SD=11.88$ ), and they noted feeling somewhat invested in their abusive relationships, fearing that they might lose something important if the relationship were to end ( $M=18.0$ ,  $SD=12.37$ ). Preliminary scale testing demonstrated much higher relationship satisfaction ( $M=32.6$ ), comparable alternative quality ( $M=19.7$ ), greater investments ( $M=25.4$ ), and much higher levels of commitment ( $M=43.5$ ) among 186 nonabusive, college-age dating couples (Rusbult et al., 1998). These data suggest that battered women within this sample reported very low levels of relationship satisfaction and commitment relative to a college sample. Unfortunately, no normative data for this measure exists among battered women living in or outside shelters.

*Stay/Leave Decision.* Nearly all (92%) of women indicated that they thought they would work toward separation and divorce upon exiting the shelter. Because prior research has shown that 24%-60% of battered women living in shelters return to their partners at discharge (e.g., Strube, 1988), this assessment is unlikely to be an accurate estimate of women's eventual stay/leave decision. Because the stay/leave measure demonstrated little to no variance within this sample, the unfortunate consequence is that this measure cannot be tested in later analyses.

In summary, descriptive analyses demonstrated high levels of exposure to abuse, moderate levels of received support behaviors with women feeling fairly satisfied with the support they received, low levels of victim-blame and avoidance, moderate levels of quality alternatives and investments, low levels of relationship satisfaction and commitment, and strong intentions to leave the relationship upon exiting the shelter.

### Primary Hypotheses

The primary purpose of this project was to assess hypothesized relationships between women's report of received social support and their feelings of dependency and commitment to their abusive relationships, such that greater levels of social support would be related to lesser feelings of dependency and commitment. Specifically, it was proposed that data would show that relationship satisfaction (SAT) and quality alternatives (ALT) would mediate the relationship between received social support types (e.g., nondirective support, positive social exchange, tangible assistance, and directive guidance) and battered women's feelings of commitment (COM).

Hypothesis 1 stated that the relationship between nondirective support and commitment (COM) would be mediated by quality alternatives (ALT), and Hypothesis 2 stated that the relationship between positive social exchange and commitment (COM) would also be mediated by quality alternatives (ALT). Because these scales were collapsed together due to their high intercorrelation, the collapsed measure will be examined in relation to commitment and quality alternatives. As an initial step, the bivariate relationship between the collapsed index and quality alternatives was examined. As Table 4 indicates, this expected bivariate relationship was not statistically significant ( $B = .17$ , ns). Similarly, Step 2 demonstrated that the expected bivariate relationship between the collapsed index and commitment was not statistically significant ( $B = .01$ , ns). Although the predicted mediational relationship was not present due to the nonsignificant findings in Steps 1 and 2 (Baron & Kenny, 1986), an additional analysis was conducted to determine whether alternative quality exerted

direct effects on commitment, controlling for the collapsed index. The collapsed index and alternative quality were entered simultaneously into the regression equation in Step 3. Results demonstrated that alternative quality exerted a direct effect on commitment ( $B = -.32, p < .05$ ), controlling for the collapsed index. That is, women who reported having higher quality alternatives endorsed lesser commitment to their abusive relationships as the Investment Model would predict; however, the expected relationships between Investment Model variables and support were not significant.

Hypothesis 3 stated that the relationship between tangible assistance and commitment (COM) would be mediated by quality alternatives (ALT). As an initial step, the bivariate relationship between tangible assistance and quality alternatives was examined. As Table 4 indicates, this expected bivariate relationship was not statistically significant ( $B = -.02, ns$ ). In contrast, Step 2 demonstrated the expected bivariate relationship between tangible assistance and commitment ( $B = -.32, p < .05$ ), meaning that women who reported receiving more resources and services endorsed lesser feelings of commitment. Although one of the required steps to demonstrate mediation was not significant (i.e., Step 1), a mediational test was conducted to see whether tangible assistance and quality alternatives exerted direct effects on commitment. In Step 3, tangible assistance and quality alternatives were entered simultaneously into the regression equation (Baron & Kenny, 1986) using commitment as the criterion variable. As Table 4 indicates, tangible assistance ( $B = -.32, p < .05$ ) and quality alternatives ( $B = -.31, p < .05$ ) demonstrated significant direct effects on women's commitment, such that women who reported receiving more resources and services endorsed lesser commitment, as did women who reported having greater quality alternatives.

Hypothesis 4 stated that the relationship between directive guidance and commitment (COM) would be mediated by quality alternatives (ALT) and relationship satisfaction (SAT). As Table 4 indicates, the expected bivariate relationship between directive guidance and alternatives was not statistically significant ( $B = .12, ns$ ) nor was the expected bivariate relationship between directive

guidance and relationship satisfaction ( $B = -.17$ , ns). In Step 2, the expected bivariate relationship between directive guidance and commitment was not significant ( $B = -.17$ , ns). Although the predicted mediational relationship was not present due to the nonsignificant findings in Steps 1 and 2 (Baron & Kenny, 1986), an additional analysis was conducted to determine whether alternative quality and relationship satisfaction exerted direct effects on commitment, controlling for directive guidance. Directive guidance and alternative quality were entered simultaneously into the regression equation in Step 3. Results demonstrated that alternative quality exerted a direct effect on commitment ( $B = -.29$ ,  $p < .05$ ), controlling for directive guidance. Similarly, in a separate analysis, relationship satisfaction also exerted a direct effect on commitment ( $B = .66$ , ns), controlling for directive guidance. That is, women who reported having higher quality alternatives endorsed lesser commitment as did women who reported lesser relationship satisfaction. Taken together, results from hypothesis 4 similarly demonstrated predicted relationships among Investment Model variables, but no other effects were significant.

#### Supplementary Hypotheses

As noted earlier, several supplementary hypotheses were advanced. These hypotheses represent either replications of prior work that examined the Investment Model among battered women (Rusbult & Martz, 1995) or explorations among study variables such as women's exposure to abuse, their feelings of support satisfaction, supporter intentions, and their experiences with victim-blame/avoidance among their supporters.

*Investment Model.* This study attempted to replicate relationships among Investment Model factors (i.e., Rusbult & Martz, 1995); therefore, it was expected that relationship satisfaction (SAT), quality alternatives (ALT), and investments (INV) would be related to women's feelings of commitment for their abusive relationships. As Table 5 indicates, relationship satisfaction demonstrated a significant positive association with commitment ( $r = .67$ ,  $p < .01$ ), such that women

who reported feeling more satisfied with their relationships were more committed to them. As predicted, quality alternatives demonstrated a significant inverse relationship with commitment ( $r = -.31, p < .05$ ), such that women who perceived themselves as having attractive alternatives reported feeling less committed. Investment size showed a significant positive association with commitment ( $r = .55, p < .01$ ), such that women who reported having invested irretrievable resources into their relationships reported feeling more committed. Further, a simultaneous regression analysis demonstrated that Investment Model factors accounted for 58% of the variance in women's commitment levels,  $F(3,47) = 21.88, p < .001$ . Relationship satisfaction ( $B = .47, p < .001$ ) demonstrated the strongest statistical relationship to women's commitment relative to alternative quality ( $B = -.23, p < .05$ ) and investment size ( $B = .35, p < .01$ ). Further, these statistical relationships are similar to or stronger than those reported by Rusbult and Martz (1995) in their preliminary analysis of the Investment Model among battered women living in shelters.

*Exposure to Abuse.* Because prior research has demonstrated that women's exposure to abuse influences their perception of the costs associated with their relationships (i.e., Rusbult & Martz, 1995), it was expected that women who were exposed to high levels of abuse would report less feelings of relationship satisfaction (SAT) and commitment (COM). As Table 6 indicates, the expected bivariate relationship between psychological aggression and relationship satisfaction was statistically significant ( $r = -.35, p < .05$ ) as was the relationship between psychological aggression and commitment ( $r = -.31, p < .05$ ). That is, women who reported experiencing more frequent psychological aggression from their partners endorsed lesser satisfaction and lesser commitment. Further, the expected bivariate relationship between physical assault and commitment was statistically significant ( $r = -.30, p < .05$ ), such that women who experienced more frequent physical assault reported feeling less committed toward their relationships. No additional bivariate relationships between women's exposure to abuse and Investment Model variables were significant (see Table 6).

In contrast, women who reported that their partners engaged in negotiation strategies to address couple conflict indicated feeling more satisfied with their relationships ( $r = .30, p < .05$ ).

*Support Satisfaction.* It was also thought that women's satisfaction with the support they received would moderate the relationship between received support behaviors and commitment (COM) because prior research has demonstrated how satisfaction with support relates to improved outcomes (e.g., Sarason & Sarason, 1994). Therefore, this study hypothesized that the relationship between received support and commitment (COM) would be different for women who reported feeling satisfied with supporter behaviors versus women who reported feeling dissatisfied. Several two-step hierarchical regression analyses were conducted to examine these predictions. Initially, the independent predictors of support frequency and support satisfaction were entered into the equation with commitment as the criterion variable. In the second step, an interaction term, which was the product of support frequency and support satisfaction, was entered. As can be seen in Table 7, results showed nonsignificant relationships among variables.

*Supporter Intentions.* It was also thought that women's perception of their supporters' intentions would moderate the relationship between directive guidance and Investment model variables. That is, the relationship between directive guidance and commitment would be different for women whose supporters encouraged them to leave their relationships versus women whose supporters encouraged them to reconcile and return to their partners. For women whose supporters encouraged them to leave their relationships, results would show an inverse association with commitment (COM). For women whose supporters encouraged them to reconcile and return to their relationships, results would show a positive association with commitment (COM). As above, several two-step hierarchical regression analyses were conducted to examine these predictions. Initially, the independent predictors of support frequency and supporter intentions were entered into the equation with commitment (COM) as the criterion variable. In the second step, an interaction term, which was the product of

directive guidance and supporter intentions, was entered. Results demonstrated that the expected relationship between supporter intentions and directive guidance entered together in step 1 was statistically significant  $F(2,48) = 10.42, p < .01$ , but the interaction term did not contribute significantly to the equation ( $r^2$  change = .01). As can be seen in Table 7, supporter intentions contributed nearly all of the variance to the equation, suggesting that women who perceived that their supporters' advice and guidance encouraged them to leave their relationships endorsed feelings of lesser commitment, irrespective of the amount or frequency of that advice.

*Victim-blame and Avoidance.* It was also thought that victim-blaming and avoidance responses from supporters would increase battered women's feelings of commitment because such responses would reduce the likelihood that women could successfully disengage from their relationships. Specifically, it was hypothesized that women who frequently experienced victim-blame would endorse stronger feelings of relationship satisfaction (SAT) and commitment (COM), and those who frequently experienced avoidance responses would endorse lesser quality alternatives (ALT) and stronger commitment (COM). However, as noted earlier, the subscales of victim-blame and avoidance were collapsed due to their high interrelationship. Therefore, the collapsed variable or total score was used in the analyses rather than the subscales. As Table 5 indicates, the expected bivariate relationship between the collapsed index/total score and relationship satisfaction was not significant ( $r = .13, ns$ ) nor was the expected relationship between the total score and commitment ( $r = .16, ns$ ). In contrast, the expected bivariate relationship between the total score and quality alternatives was significant ( $r = -.30, p < .05$ ) whereas the expected relationship between the total score and commitment was not ( $r = .16, ns$ ). Taken together, these findings indicate that women whose supporters more frequently blamed and/or avoided them perceived that they had fewer high quality alternatives available outside their abusive relationships.

### Additional Statistical Analyses Relevant to Null Findings

Unfortunately, a number of the predicted primary and supplementary hypotheses were not supported. Although it is difficult to determine reasons for null findings, some possible explanations were examined empirically. For example, null findings within this study may be related to women's shelter stay and its effect on their responses to measurement items. The following analyses examined these possibilities.

*Impact of Shelter Stay.* As noted earlier, battered women had not had contact with a significant number of their supporters subsequent to the women entering the shelter; therefore, it was thought that women's received support might vary depending on the amount of time spent in the shelter. For this reason, women's time spent at the shelter was examined in relation to received support indices. Correlation analyses showed no relationship between women's report of received support and their time living in the shelter. Further, women's time spent in the shelter was examined in relation to their report of relationship satisfaction, quality alternatives, investments, and commitment. Results similarly showed nonsignificant statistical relationships. Thus, there is no evidence that women's time spent in the shelter affected women's scores on the received support or Investment Model measures; therefore, this is an unlikely explanation for null findings.

*Impact of Multiple Shelters.* To expedite data collection and increase external validity, women were sampled from multiple domestic violence shelters within the central North Carolina area; however, as a consequence, women's differential experiences within each individual shelter may have affected findings. As can be seen in Table 8, women from the nine domestic violence shelters evidenced some variance across measures. Unfortunately, due to small sample size within most of the nine shelters, many women's scores could not be statistically compared. However, nearly half of the women in this sample were recruited from shelters 1 and 5 (n=24); therefore, these women's scores were statistically compared. Although t-tests showed no differences in women's scores on nearly all

measures, women's scores on supporter intentions showed reliable differences,  $t(22) = -2.83$ ,  $p < .05$ . That is, women from shelter 5 reported that their supporters encouraged them to work toward separation and divorce more than did women from shelter 1. Although inferences would need to be speculative as t-tests showed no differences across all other measures, mean scores on directive guidance, tangible assistance, quality alternatives, and commitment suggest that increased support may be related to increased quality alternatives and decreased commitment within these two shelters (see Table 8).

### Exploratory Analyses

*Received Support as a Moderator.* Additional exploratory analyses that examined the relationship between received support and commitment were conducted. It was thought that perhaps women's receipt of the collapsed index of nondirective support/positive social exchange, and directive guidance would interact with tangible assistance to affect their commitment levels. That is, perhaps women's ability to benefit from tangible assistance depended on their receipt of other types of support. One might imagine that providing women with resources or services (i.e., tangible assistance) without showing empathy (i.e., nondirective support) or giving advice and guidance (i.e., directive guidance) might not influence women's commitment as much as providing women with tangible assistance in conjunction with other types of support. Unfortunately, analyses demonstrated nonsignificant interaction effects for nondirective support/positive social exchange ( $r^2$  change = .00, ns) and directive guidance ( $r^2$  change = .00, ns), suggesting that these types of support do not interact with tangible assistance to affect women's commitment.

*Unique Contributions to Commitment.* Another exploratory regression analysis examined the unique contributions of all the demonstrated predictors of women's commitment. In other words, relationship satisfaction, quality alternatives, investments, tangible assistance, and supporter intentions were entered simultaneously into a regression equation to predict women's commitment. Results

showed that the overall model predicted 65% of the variance in women's commitment,  $F(5,45) = 16.78, p < .001$ . Relationship satisfaction ( $B = .40, p < .001$ ), alternatives ( $B = -.19, p < .05$ ), investments ( $B = .28, p < .01$ ) and tangible assistance ( $B = -.20, p < .05$ ) maintained their relationships with women's commitment; however, supporter intentions ( $B = -.18, p < .08$ ) was reduced to a marginal level. Thus, results of these analyses indicate that each of these predictors evidence some unique variance with women's commitment.

*Directive Guidance as a Mediator.* Additional mediational analyses were conducted because of results showing several interesting, statistically significant bivariate correlations. For example, physical assault, directive guidance, and commitment all demonstrated significant bivariate relationships with one another (see Table 6). Thus, in an exploratory manner, a series of regression analyses were conducted to test whether directive guidance mediated the relationship between physical assault and commitment (see Table 9). Results demonstrated a statistically significant bivariate relationship between directive guidance and physical assault ( $B = .29, p < .05$ ) in the first step, and a statistically significant bivariate relationship between physical assault and commitment ( $B = -.30, p < .05$ ) in the second step. However, Step 3 demonstrated that, controlling for physical assault, the relationship between directive guidance and commitment was nonsignificant ( $B = -.09, ns$ ). Further, controlling for directive guidance, the relationship between physical assault and commitment was reduced to a marginal level ( $B = -.27, p < .07$ ), but this drop was not statistically significant ( $r^2$  change = .00). Thus, results suggest that directive guidance does not mediate the relationship between physical assault and commitment, but rather physical assault exerts a marginal direct effect on commitment. That is, women who report exposure to higher levels of physical assault tend to endorse lower levels of commitment. Moreover, women's receipt of advice and guidance (i.e., directive guidance) is unrelated to their commitment levels.

In a similar manner, a series of regression analyses examined whether directive guidance mediated the relationship between psychological aggression and commitment (see Table 9). Results demonstrated a statistically significant bivariate relationship between directive guidance and psychological aggression ( $B = .37, p < .01$ ) in the first step, and a statistically significant bivariate relationship between psychological aggression and commitment ( $B = -.31, p < .05$ ) in the second step. However, Step 3 demonstrated that, controlling for psychological aggression, the relationship between directive guidance and commitment was nonsignificant ( $B = -.07, ns$ ). Further, controlling for directive guidance, the relationship between psychological aggression and commitment was reduced to a marginal level ( $B = -.28, p < .07$ ), but this drop was not statistically significant ( $r^2$  change = .00). As above, results suggest that directive guidance does not mediate the relationship between psychological aggression and commitment, but rather psychological aggression exerts a marginal direct effect on commitment. That is, women who report exposure to higher levels of psychological aggression tend to endorse lower levels of commitment.

*Relationship Satisfaction as a Mediator.* Another series of regression analyses examined whether relationship satisfaction mediated the relationship between physical assault and commitment (see Table 9). Results demonstrated a nonsignificant bivariate relationship between relationship satisfaction and physical assault ( $B = -.23, ns$ ) in the first step, and a statistically significant bivariate relationship between physical assault and commitment ( $B = -.30, p < .05$ ) in the second step. Although necessary criteria were not met to demonstrate mediation (Baron & Kenny, 1986), an additional regression analysis was conducted to test for direct effects. Therefore, Step 3 demonstrated that relationship satisfaction exerted a significant direct effect on commitment ( $B = .64, p < .001$ ), but physical assault did not ( $B = -.15, ns$ ). Furthermore, the relationship between physical assault and commitment was reduced from Step 1 to Step 3, indicating evidence of partial mediation. That is, women's feelings of

relationship satisfaction partially mediated the relationship between women's exposure to physical assault and their commitment.

In addition, another series of regression analyses examined whether women's feelings of relationship satisfaction mediated the relationship between their exposure to psychological aggression and their commitment (see Table 9). Results demonstrated a significant bivariate relationship between relationship satisfaction and psychological aggression ( $B = -.35, p < .01$ ) in the first step, and a statistically significant bivariate relationship between psychological aggression and commitment ( $B = -.31, p < .05$ ) in the second step. Further, Step 3 demonstrated that the relationship between psychological aggression and commitment was reduced to nonsignificance ( $B = -.08, ns$ ) after controlling for the effect of relationship satisfaction. That is, women's feelings of relationship satisfaction partially mediated the relationship between women's exposure to psychological aggression and their commitment.

## Discussion

The primary purpose of this project was to assess the effect of received social support on battered women's commitment to their abusive relationships in order to link theory to current research on support interventions (Sullivan & Bybee, 1999). Specifically, it was proposed that data would show that relationship satisfaction and quality alternatives would mediate the relationship between received social support types (i.e., nondirective support, positive social exchange, tangible assistance, and directive guidance) and battered women's feelings of commitment. In other words, it was thought that the processes by which received social support affected women's commitment could be explained by changes in their feelings of relationship satisfaction and perceptions of quality alternatives. In particular, it was thought that, for battered women, their receipt of social support would most affect their perception of quality alternatives because social support would generally communicate that important needs could be fulfilled by people other than the women's abusive partners. Furthermore, it

was thought that battered women living in shelters would be particularly affected by social support, presumably because they would not have accessed such services unless they had no other resources available to them.

Results demonstrated that women who received more resources and services (i.e., tangible assistance) endorsed lesser commitment to their abusive relationships; however, showing concern, giving advice, and spending time in recreational activities (i.e., nondirective support, directive guidance, and positive social exchange) were unrelated to women's commitment. Further, women's receipt of social support did not influence their feelings of relationship satisfaction and perception of quality alternatives. That is, supporters who showed empathy, gave advice, spent time in recreational activities and provided resources did not affect how the women perceived their abusive relationships (i.e., relationship satisfaction) or how they perceived alternatives to their abusive relationships (i.e., quality alternatives).

Moreover, neither support satisfaction nor supporter intentions moderated the nonsignificant relationships found between received support and commitment. In other words, women who reported feeling satisfied with supporter behaviors endorsed similar amounts of received support and commitment as did women who reported feeling dissatisfied with supporter behaviors. In the same manner, women whose supporters encouraged them to work toward separation and divorce (i.e., supporter intentions) endorsed similar amounts of directive guidance and commitment as did women whose supporters encouraged them to reconcile and return to their abusive partners. However, supporter intentions demonstrated a direct effect on women's commitment, such that women who perceived that their supporters encouraged them to work toward separation and divorce reported lesser commitment, irrespective of the frequency or amount of that advice.

Taken together, results from this preliminary study demonstrated that tangible assistance and supporter intentions were directly related to battered women's commitment. Further, exploratory

analyses showed that the effects of tangible assistance and supporter intentions were uniquely important in understanding women's commitment above and beyond Investment Model factors. Thus, it may be that tangible assistance is especially important for battered women living in shelters. Typically, shelter women have few, if any resources available to them. Many of the women noted anecdotally that they relinquished all their material possessions to escape their partner's violence and enter the shelter system. Providing these women with material resources to replace those they lost (e.g., clothing) and providing them with services that they require to live independently of abusers (e.g., legal counsel, restraining orders, etc.) have historically been the main focus of shelter interventions designed to assist battered women (see Jasinski & Williams, 1998, for review). Similarly, social support intervention studies that provided women exiting shelters with advocacy services assisted them in accessing resources and services within the community (e.g., Sullivan & Bybee, 1999) for the purpose of improving their distress levels and reducing their exposure to abuse. Other studies on domestic violence have also demonstrated the importance of tangible assistance (Goodman, Bennett & Dutton, 1999; Thompson et al., 2000). Results from these studies showed that tangible assistance predicted battered women's cooperation with the legal system in prosecuting their partners (Goodman et al., 1999), and it reduced women's distress levels (Thompson & Kaslow, 2000). In sum, the present study's findings in conjunction with others (e.g., Goodman et al., 1999) suggest that providing battered women with resources and services likely improves their outcomes.

Supporter intentions also exerted a direct effect on women's commitment, such that women whose supporters encouraged them to work toward separation and divorce endorsed lesser commitment. Further, this relationship marginally remained even after accounting for Investment Model variables and tangible assistance. In another Investment Model study, Cox and colleagues (Cox, Wexler, Rusbult, & Gaines, 1997) showed that dating and married individuals who believed that their support network members encouraged their persisting in their current relationships tended to

endorse greater levels of commitment for their current relationships. Cox and colleagues named this construct “prescriptive support,” and it predicted commitment above and beyond Investment Model factors (Cox et al., 1997) just as supporter intentions predicted commitment in this study. Given the similarity between the operationalization of prescriptive support and supporter intentions, this study’s data may provide additional evidence that the degree to which supporters encourage persisting in relationships influences commitment level. However, it should be noted that supporter intentions were assessed via one item created for this study; therefore, it may be somewhat premature to conclude that it is uniquely predictive of battered women’s commitment.

A secondary purpose of this study was to replicate results from preliminary work that applied the Investment Model to battered women living in shelters (Rusbult & Martz, 1995). Results from the present study found that battered women who reported lesser relationship satisfaction, higher quality alternatives, and fewer investments endorsed lesser commitment to their abusive relationships, as the Investment Model would predict. Furthermore, results showed that each individual factor contributed unique variance to the prediction of commitment. Unlike the Rusbult and Martz (1995) study, however, the present study demonstrated stronger relationships between some Investment Model factors, most notably relationship satisfaction, and women’s commitment. Specifically, results showed that relationship satisfaction was more strongly predictive of women’s commitment than were investments or quality alternatives, suggesting that battered women’s relationship satisfaction may be particularly important for understanding their commitment. Further, women’s exposure to certain forms of abuse (e.g., psychological aggression and physical assault) influenced their relationship satisfaction, suggesting that abuse is most likely perceived as an extreme cost. This finding supports prior research which showed that increased frequency and severity of abuse reduces relationship satisfaction (Bauserman & Arias, 1992; Katz et al., 1995; Street et al., 1999). Moreover, results from the present study demonstrated that women’s feelings of satisfaction partially mediated the relationship

between exposure to abuse and commitment. That is, women's feelings of relationship satisfaction may partially explain the process by which exposure to abuse and commitment relate.

Unfortunately, the present study was unable to test the relationship between stay/leave decisions and women's commitment due to low variability on the stay/leave measure. In retrospect, low variability on the stay/leave measure is not surprising for several reasons. First, recent data show that battered women living in shelters underestimate the likelihood that they will return to their abusive partners upon exiting shelters, and they tend to perceive few obstacles to making their separation permanent, irrespective of women's difficulties with maintaining separation in the past (Griffing et al., 2002). Next, several women reported anecdotally that they were unsure whether they intended to return to their partners or work toward separation and divorce upon exiting the shelter. But because they were forced to choose between staying or leaving (i.e., this item was dichotomous by design), they chose leaving. Had this study assessed women's behavioral intentions about staying or leaving with several items using a continuous scale, results would have demonstrated greater variability on stay/leave and greater accuracy of women's report.

In summary, results from this study suggest that tangible assistance and supporter intentions may be important for understanding battered women's commitment. Further, results suggest that social support intervention studies designed to assist women in obtaining resources and services (e.g., Sullivan & Bybee, 1999) may reduce battered women's commitment toward their abusive relationships.

*Possible Reasons for Null Findings.* Although data confirmed some hypotheses, many hypotheses were not supported. Thus, it may be useful to explore possible reasons for null findings in the hopes of improving upon this type of research in the future. Therefore, the following section will briefly mention diagnostic tests that were conducted as a means of ruling out some possible

explanations (e.g., violation of statistical assumptions). Then, those areas that seemed most plausible will be discussed in greater depth.

As noted earlier, statistical tests of measurement reliability were conducted across all measures. Two subscales within the abuse exposure measure, namely negotiation and sexual coercion, demonstrated lower than expected alpha coefficients as did the tangible assistance subscale within the received support measure. Yet, data show many expected relationships among these measures. Therefore, it is not likely that this study's administration of these measures and subsequent low alpha coefficients significantly reduced their predictive utility. In addition, the Investment Model Scale's (Rusbult et al., 1998) measurement of alternative quality may have been an inappropriate measure of alternative quality for this particular population. As alternative quality is presently measured, it assesses women's perceptions of the desirability and availability of alternative *intimate* partners. For example, item one reads, "The people other than my partner with whom I might become more involved are very appealing." Other items read similarly, "If I weren't dating or married to my partner, I would find someone else" or "My needs for intimacy and companionship could easily be fulfilled in an alternative relationship." Unfortunately, these items do not assess the degree to which women perceive that they could successfully care for their own needs without the support of a partner. Perhaps, for battered women, their ability to care for themselves and their children and the desirability and/or availability of friends and family may be more important. However, in the present study, alternative quality was statistically related to women's commitment as the Investment Model would predict. Therefore, although it seems unlikely that the measurement of alternative quality led to this study's null findings, it may have contributed to the lower than expected magnitude of findings between alternatives and commitment. Further, it may explain the lack of relationship between alternatives and tangible assistance.

Next, a series of diagnostic tests were conducted to ascertain potential violations of statistical assumptions. First, the assumption of linearity and homoscedascity were examined. Results demonstrated that only measures of relationship satisfaction and commitment evidenced possible nonlinearity and heteroscedascity upon examination of their residuals plots and histograms; yet, these measures were strongly related to Investment Model factors. Next, a series of statistical tests were conducted to determine potential influential cases. Upon examination of studentized residuals and Cook's Distance values, it appeared as though there were no influential cases across all measures. In sum, results of diagnostic testing suggest that statistical assumptions were not violated for most measures. Although relationship satisfaction and commitment evidenced possible nonlinearity and heteroscedascity, these measures demonstrated predicted relationships with the Investment Model; therefore, this explanation may not necessarily account for null findings.

It could also be argued that small sample size contributed to this study's lack of findings. Given that statistical significance for correlational and regression analyses are largely affected by sample size, this study's small sample and subsequent low power significantly reduced the likelihood of disconfirming null hypotheses. Yet, an examination of Pearson's  $r$  and beta weights from regression analyses suggest that, in general, effect sizes for predicted relationships were small. Therefore, an increase in sample size and statistical power may have demonstrated statistically significant findings, but those findings may not have been clinically meaningful.

It is also possible that women's shelter stay impacted their responses to measurement items in such a way as to reduce the likelihood of finding hypothesized relationships. As noted earlier, the received social support measure used in this study assessed women's experiences with support within the past month, meaning that many had limited access to their support networks at the time of data collection. Presumably, battered women who seek the services of domestic violence shelters have limited social support networks; therefore, prior to entering the shelter, they would have endorsed low

levels of social support. In the same way, women who spent a month or more living in the shelter prior to data collection would have endorsed high levels of social support. Yet, an examination of women's length of shelter stay and their frequency of received social support showed little to no relationship. Although this is a confusing and somewhat disappointing finding, it assumes that women completed the measure accurately at the time of data collection. It is very possible that battered women who spent less than one month in the shelter struggled to complete the received support measure as it is currently written. It would have required that they calculate the amount of support received prior to their shelter stay in conjunction with the amount of support they received during their shelter stay. It seems likely that this might have contributed to error on the received support measure such that current data do not accurately portray women's true experiences with social support. Naturally, this type of error may have contributed to this study's null findings.

Furthermore, women reported anecdotally that one of the reasons they did not have contact with their friends or family members during their shelter stay was because their supporters resided in other states. In other words, many women were removed from their main support systems and their communities in order to escape their partners' violence. Thus, it is additionally possible that women's removal from their communities might have impacted whether their receipt of support affected their perceptions of alternatives and/or their feelings of commitment. It may be that women who were removed from their main supporters received frequent and satisfactory amounts of support during their shelter stay, but that their perceptions were that staff support would last only as long as they lived in the shelter. Given that these women were physically separated from their former support systems (i.e., those persons who might have continued to provide support beyond a shelter stay), they might have perceived themselves as having fewer options or choices (i.e., quality alternatives) other than returning to their partners. Thus, it is possible that women who were removed from their main supporters may

have endorsed high levels of social support in conjunction with *lower* levels of quality alternatives and greater commitment, thereby showing a pattern at odds with the study's primary hypotheses.

In addition, it may be that advocates' provision of social support may have been qualitatively different in some important ways from support provided by friends, family, shelter residents or shelter workers. In that this study did not assess the impact of support provided by advocates, it could be that the support provided by naturally occurring sources does not impact women's outcomes as much as support provided by advocates. That is, it seems likely that advocates' provision of social support may have been better timed (e.g., at the point of exiting shelters), better matched (e.g., based on women's self-identified needs), or simply more responsive to women's needs than support provided by others.

Finally, it is conceivable that the time period during which women were assessed may have contributed to this study's null findings. Battered women who seek the safety of domestic violence shelters likely experience confused and unstable feelings about their abusive relationships. Because, for most women, an extremely violent episode probably prompted their decision to enter the shelter, their feelings of relationship satisfaction and commitment at the point of entry and possibly throughout their stay are likely to be minimal, just as the data show. At debriefing, numerous women noted feeling as though questions that asked them to rate their feelings of relationship satisfaction and commitment to their abusers were ludicrous. One woman stated, "All I have to do is look at myself in the mirror [she had a severely injured face], and I am reminded of how much I hate him." In contrast, women's scores on the received support measure were highly variable. Statistically speaking, it is difficult to demonstrate empirical relationships between one relatively invariable construct (i.e., commitment) and one variable construct (i.e., social support), which may have reduced the chances of confirming this study's primary hypotheses. Yet, as mentioned earlier, commitment demonstrated predicted relationships with Investment Model variables, suggesting that the present study's variance

on commitment was adequate. However, had women been assessed at a different point in time (e.g., at the point of exiting shelters), their scores on measurements of relationship satisfaction and commitment may have been more variable. Notably, the Sullivan and Bybee (1999) intervention studies measured outcomes for battered women at the point of exiting shelters and at 6-month, 1 and 2-year follow-ups. Therefore, the present study's null findings between support and commitment may be partially related to the time women were assessed.

However, the possibility that battered women's receipt of social support is unrelated to their feelings of dependency and commitment must be entertained. Although several empirical studies suggest that social support may be related to improved outcomes for battered women (e.g., Sullivan & Bybee, 1999), no studies to date have demonstrated an empirical relationship between social support and commitment. Moreover, the Sullivan and Bybee (1999) intervention studies, upon which the present study is based, tested whether the efforts of advocates improved outcomes for battered women; they did not explicitly test whether social support improved outcomes. Presumably, increased social support was the active ingredient within those interventions, but perhaps this assumption needs to be revisited. In fact, Sullivan and Bybee (1999) believed that their decision to tailor interventions to accommodate women's self-identified needs produced desired results. If this is true, then perhaps the active ingredient was the women's control over the content of the intervention. Maybe battered women, who presumably lack control within their relationships, feel particularly empowered by being encouraged to take control. Perhaps by being given control, women assumed more control over other areas of their lives, which lead to reductions in their feelings of distress and/or their exposure to future episodes of violence.

In addition, it may be that moderating variables, other than those measured and tested in the present study, explain the relationship between support and commitment. For example, in a recent study by Arias and Pape (1999) results demonstrated that, among 68 battered women living in

shelters, women's symptoms of posttraumatic stress disorder (PTSD) significantly moderated the relationship between their exposure to abuse and intentions to terminate relationships. That is, results showed that the relationship between abuse and intentions to leave was significant among women who endorsed low levels of PTSD, but the relationship was nonsignificant for women who endorsed high levels of PTSD. Based on this, researchers concluded that the presence of high levels of PTSD may have interfered with women's intention to leave abusive partners following both physical and psychological abuse (Pape & Arias, 1995). Therefore, it seems likely that a potential moderating variable of the relationship between social support and commitment may be women's current psychological symptomatology such as PTSD. Perhaps women who endorse low levels of PTSD are better able to benefit from social support compared with women who endorse high levels of PTSD.

*Limitations.* In addition to the design issues previously mentioned (e.g., impact of shelter stay), several other limitations of this study need to be addressed. For example, this study's correlational data and cross-sectional design prohibit strong inferences regarding cause and effect. That is, it is plausible that women who endorsed lesser commitment to their relationships actively sought resources and services (i.e., tangible assistance) to assist them in the process of leaving their abusive partners. Similarly, women who endorsed lesser commitment may have convinced their supporters to adopt their perspective about separating from their abusive partners (i.e., supporter intentions). Since past experimental studies have demonstrated that manipulations in relationship satisfaction, alternative quality, and investments lead to changes in commitment (e.g., Farrell & Rusbult, 1981), future researchers should adopt a similar experimental strategy (e.g., via the use of hypothetical scenarios) to test whether tangible assistance and supporter intentions impact battered women's commitment. In addition, this study's large number of analyses increased the chances that significant findings may have been spurious. Researchers have commonly accounted for spurious significance by lowering alpha levels, but given this study's small sample size, alpha levels could not be lowered. Thus, this suggests

that the present study's findings may need to be replicated, particularly those that were not predicted at the onset of the study.

*Future Directions.* In that this study marks the beginning of a program of research designed to test the association between social support and commitment, null findings for many of this study's primary hypotheses should not preclude future research in this area. Future studies should primarily focus on establishing whether social support is associated with battered women's commitment. To increase the likelihood of confirming this relationship, future research should improve upon this study's limitations. Specifically, future studies should create better measurement of this study's main predictor (e.g., a population-specific measure of alternative quality) and criterion variables (e.g., stay/leave decisions) as well as adopt either a longitudinal design similar to intervention studies or an experimental design (e.g., hypothetical scenarios). Furthermore, future studies should consider comparing the effectiveness of support provided by advocates with the effectiveness of support provided by naturally occurring sources.

Moreover, the relationship between social support and battered women's commitment may be complicated by additional moderating variables that were not assessed in the present study (e.g., effect of psychiatric symptomatology). Future studies should consider whether the support by commitment relationship could be better detected by assessing potential moderating variables. Similarly, it is also possible that mediating variables, other than those examined in the present study, better explain the processes by which support affects commitment. It may be that variables such as self-efficacy for leaving abusive partners better explain the relationship between social support and commitment than do relationship satisfaction or quality alternatives.

*Clinical Implications.* Results from this study demonstrated the unique contributions of relationship satisfaction, quality alternatives, investments, tangible assistance and supporter intentions in predicting battered women's commitment to their abusive relationships. Therefore, clinical

interventions designed to affect any one or all of these factors should impact battered women's feelings of dependency and commitment. Lesser commitment should theoretically induce women into leaving their abusive relationships, which may reduce their psychological distress and exposure to future episodes of violence. Thus, clinical interventions designed to reinforce women's negative perceptions of their relationships subsequent to an abusive episode (i.e., relationship satisfaction), improve the quality of alternatives to their abusive relationships (i.e., quality alternatives), provide them with necessary resources and services (i.e., tangible assistance), and encourage them to leave (i.e., supporter intentions) should be most effective. However, many battered women's advocates criticize interventions which focus on encouraging women to leave because such interventions likely invalidate women's decision-making abilities and/or ignore the many structural barriers that prevent women from leaving (e.g., Sullivan & Bybee, 1999). Implications of this study's findings do not contradict Sullivan and Bybee's (1999) assertion, rather results similarly suggest that the process by which battered women eventually leave their abusive relationships may be extremely difficult and complex. However, it seems plausible that clinicians working with battered women could take the position that battered women likely suffer less if they leave without invalidating women's decision-making abilities or ignoring the structural barriers. Actually, results from the present study further support the notion that battered women require resources and services to lessen the impact of structural barriers. That is, results from the present study provide additional evidence that the remedy for domestic violence is best addressed by looking to the women's larger social context rather than to her personality characteristics.

In conclusion, this study marks the beginning of a theoretically-based research program designed to examine how social support may affect behavioral outcomes for battered women. Whereas prior research on social support has predominately focused on the impact of support on psychological or health-related outcomes (e.g., Sarason et al., 1994), this study conceptually linked social support with

theory and research on behavioral outcomes, such as battered women's stay/leave decisions. Furthermore, data gathered during the course of this study provided preliminary descriptive information on several conceptually-relevant, psychometrically-sound instruments for which no normative data exists among battered women living in or outside of shelters. Such data may be used by future researchers who seek to examine received social support, commitment, and exposure to abuse within battered women samples. Future studies will be able to compare directly the level of received social support, commitment, and exposure to abuse among their study's participants to the current sample. And finally, results from the present study reiterate the importance of reducing the many structural barriers that interfere with battered women leaving their abusive relationships. By providing resources and services to battered women, service providers effectively eliminate battered women's helplessness and dependency on their partners. This suggests a continued need for battered women to receive coordinated, multidisciplinary services from a variety of providers such as police officers, career counselors, and shelter workers.

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Table 1. Relationships among Exposure to Abuse Subscales (CTS2), Received Supportive Behaviors Subscales (ISSB), and Unsupportive Behaviors Subscales (VBAS).

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
<b>CTS2</b>													
1. Negotiation	1.00	-.16	.00	-.17	.01								
2. Psychological Aggression		1.00	.65**	.58**	.56**								
3. Physical Assault			1.00	.69**	.88**								
4. Sexual Coercion				1.00	.63**								
5. Injury					1.00								
<b>ISSB</b>													
6. Directive Guidance						1.00	.56**	.71**	.51**	.68**			
7. Nondirective Support							1.00	.83**	.95**	.52**			
8. Positive Social Exchange								1.00	.96**	.49**			
9. Collapsed NS & PSE									1.00	.53**			
10. Tangible Assistance										1.00			
<b>VBAS</b>													
11. Victim-Blame											1.00	.76**	.93**
12. Avoidance												1.00	.94**
13. Total Score													1.00

N = 51.

\*\*p < .01

Table 2. Characteristics of total sample (n=51).

<b>Age</b>		33.0 ± 7.75
<b>Ethnicity</b>	Caucasian	45%
	African-American	47%
	Hispanic	3.9%
	Multi-racial	2%
	Other	2%
<b>Religious Background</b>	Catholic	10.2%
	Protestant (any denomination)	65.3%
	Muslim	2.0%
	None	12.2%
	Other	10.2%
<b>Education</b>	Some high school	35.3%
	High school degree	7.8%
	Technical school	27.5%
	Some college	25.5%
	Bachelor's degree	3.9%
<b>Number of children</b>		2.5 ± 1.5
<b>Employment Status</b>	Unemployed	76.5%
	Part-time employed	7.8%
	Full-time employed	9.8%
	Disability	5.9%
<b>Women's income</b>	Less than \$100/wk	70.6%
	\$101-\$200/wk	21.6%
	\$201-\$300/wk	7.8%
<b>Partner's income</b>	Less than \$100/wk	13%
	\$101-200/wk	8.7%
	\$201-300/wk	15.2%
	\$301-400/wk	26.1%
	\$401-500/wk	8.7%
	\$501-600/wk	6.5%
	\$601-700/wk	4.3%
	More than \$700/wk	17.4%
<b>Relationship status</b>	Single	37.3%
	Married/co-habiting	17.6%
	Separated	35.3%
	Divorced	9.8%
<b>Relationship length (years)</b>		6.34 ± 4.83
<b>Shelter stay (days)</b>		27.3 ± 37.7

Table 3. Means and (Standard Deviations) for CTS2, ISSB, IMS, SWS, SI, and VBAS variables.

	<u>Mean</u>	<u>(STD)</u>	<u>Actual Range</u>	<u>Possible Range</u>
<b>Conflict Tactics Scale 2 (CTS2)</b>				
Psychological Aggression	105.8	(51.22)	13-200	0-200
Physical Assault	100.3	(84.40)	0-290	0-300
Sexual Coercion	46.6	(39.50)	0-150	0-175
Injury	32.9	(33.19)	0-140	0-150
Negotiation	51.4	(35.00)	0-130	0-150
<b>Inventory of Socially Supportive Behaviors (ISSB)</b>				
Directive Guidance (DG)	23.5	(12.34)	3-52	0-52
Collapsed Scale (NSPSE)	22.5	(11.81)	0-44	0-44
Tangible Assistance (TA)	12.5	(6.96)	0-32	0-40
<b>Satisfaction with Support (SWS)</b>	16.9	(3.90)	6-24	6-24
<b>Supporter Intentions (SI)</b>	3.8	(1.22)	1-5	1-5
<b>Victim-Blame/Avoidance (VBAS)</b>				
Victim-Blame/Avoidance	11.2	(12.53)	0-50	0-56
<b>Investment Model Scale (IMS)</b>				
Relationship Satisfaction (SAT)	5.22	(8.26)	0-38	0-40
Quality of Alternatives (ALT)	19.57	(11.88)	0-40	0-40
Investments (INV)	18.04	(12.37)	0-40	0-40
Commitment (COM)	15.12	(15.55)	0-52	0-56

**Table 4. Summary of the Three Step Mediation Analysis with Quality Alternatives and Relationship Satisfaction as the mediators of the Relation Between Received Support and Commitment.**

Variable	<u>b</u>	<u>SE b</u>	<u>B</u>	<u>R<sup>2</sup></u>
<i>Hypotheses 1 &amp; 2: Does Quality Alternatives mediate the relationship between Commitment and the collapsed index of Nondirective Support and Positive Social Exchange?</i>				
Step 1: Alternatives (ALT) regressed on: Collapsed NS and PSE	.17	.14	.17	.03
Step 2: Commitment (COM) regressed on: Collapsed NS and PSE	.02	.19	.01	.00
Step 3: Commitment (COM) regressed on: Collapsed NS and PSE and Alternatives (ALT)	.09 -.41*	.18 .18	.07 -.32*	.10
<i>Hypothesis 3: Does Quality Alternatives mediate the relationship between Commitment and Tangible Assistance?</i>				
Step 1: Alternatives (ALT) regressed on: Tangible Assistance	-.04	.24	-.02	.00
Step 2: Commitment (COM) regressed on: Tangible Assistance	-.70*	.30	-.32*	.10
Step 3: Commitment (COM) regressed on: Tangible Assistance and Alternatives (ALT)	-.72* -.41*	.29 .17	-.32* -.31*	.20
<i>Hypothesis 4a: Does Quality Alternatives mediate the relationship between Commitment and Directive Guidance?</i>				
Step 1: Alternatives (ALT) regressed on: Directive Guidance	.12	.14	.12	.02
Step 2: Commitment (COM) regressed on: Directive Guidance	-.22	.18	-.17	.03
Step 3: Commitment (COM) regressed on: Directive Guidance and Alternatives (ALT)	-.17 -.39*	.17 .18	-.14 -.29*	.11
<i>Hypothesis 4b: Does Relationship Satisfaction mediate the relationship between Commitment and Directive Guidance?</i>				
Step 1: Relationship Satisfaction (SAT) regressed on: Directive Guidance	-.11	.09	-.17	.03
Step 2: Commitment (COM) regressed on: Directive Guidance	-.22	.18	-.17	.03
Step 3: Commitment (COM) regressed on: Directive Guidance and Relationship Satisfaction (SAT)	-.08 1.25**	.14 .20	-.06 .66**	.46**

**Note:** N = 51. b = unstandardized regression coefficient. SE b = standard error of the unstandardized regression coefficient. B = standardized regression coefficient. R<sup>2</sup> = the proportion of variance in the dependent variable accounted for by all the independent variables in the regression equation.

\*p < .05, \*\*p < .01.

Table 5. Relationships among Women's Commitment (IMS) and their Receipt of Supportive (ISSB) and Unsupportive Behaviors (VBAS).

	(SAT)	(ALT)	(INV)	(COM)
<b><u>IMS</u></b>				
Relationship Satisfaction	1.00	-.19	.44**	.67**
Quality Alternatives		1.00	.05	-.31*
Investments			1.00	.55**
Commitment				1.00
<b><u>ISSB</u></b>				
Directive Guidance	-.17	.12	-.13	-.17
Nondirective Support	.25	.11	-.05	.02
Positive Social Exchange	.09	.21	-.07	.00
Collapsed NS & PSE	.17	.17	-.07	.01
Tangible Assistance	-.12	-.02	-.17	-.32*
<b><u>VBAS</u></b>				
Victim-Blame	.05	-.32*	.14	.09
Avoidance	.20	-.25	.35*	.21
Total Score	.13	-.30*	.27	.16

N = 51. (SAT) = Relationship Satisfaction; (ALT) = Quality Alternatives; (INV) = Investments; (COM) = Commitment.

\* $p < .05$ , \*\* $p < .01$

Table 6. Relationships among Women's Exposure to Abuse (CTS2) and their Receipt of Supportive Behaviors (ISSB), Unsupportive Behaviors (VBAS), and Commitment (IMS).

	Negotiation	Psychological Aggression	Physical Assault	Sexual Coercion	Injury
<b><u>ISSB</u></b>					
Directive Guidance	-.03	.37**	.29*	.31*	.29*
Nondirective Support	.19	.10	.14	.20	.09
Positive Social Exchange	.02	.17	.12	.27	.05
Collapsed NS & PSE	.11	.14	.13	.24	.07
Tangible Assistance	.01	.04	.20	.16	.20
<b><u>VBAS</u></b>					
Victim-Blame	.14	.14	.17	.10	.17
Avoidance	.11	.05	.20	.21	.23
Total Score	.13	.10	.20	.17	.22
<b><u>IMS</u></b>					
Relationship Satisfaction	.30*	-.35*	-.23	-.16	-.25
Quality Alternatives	-.26	.11	-.03	-.05	-.03
Investments	.08	-.19	-.27	-.26	-.17
Commitment	.27	-.31*	-.30*	-.23	-.16

N = 51.

\*p < .05, \*\*p < .01

Table 7. Summary of the Two-Step Moderation Analysis with Support Satisfaction moderating the Relations between Received Support and Commitment.

Variable	b	SE b	B	R <sup>2</sup>	R <sup>2</sup> change
<u>Commitment as Criterion Variable</u>					
Step 1a (main effects)					
Directive Guidance (DG)	-.10	.22	-.08		
Support Satisfaction	-.66	.68	-.17	.05	
Step 2a (interaction effect)					
DG X Satisfaction	-.05	.04	-.93	.08	.03
Step 1b (main effects)					
Collapsed Index (NSPSE)	.27	.23	.21		
Support Satisfaction	-1.32	.69	-.33	.07	
Step 2b (interaction effect)					
NSPSE X Satisfaction	-.07	.04	-1.15	.12	.05
Step 1c (main effects)					
Tangible Assistance (TA)	-.62	.34	-.28		
Support Satisfaction	-.38	.60	-.10	.11	
Step 2c (interaction effect)					
TA X Satisfaction	.004	.08	.05	.11	.00
Step 1d (main effects)					
Directive Guidance (DG)	-.12	.15	-.09		
Supporter Intentions	-6.74	1.56	-.53**	.30**	
Step 2d (interaction effect)					
DG X Supporter Intentions	-.13	.15	-.53	.31	.01

Note. N = 51. b = unstandardized regression coefficient. SE b = standard error of the unstandardized regression coefficient. B = standardized regression coefficient. R<sup>2</sup> = the proportion of variance in the criterion variable accounted for by all the predictors in the regression equation. R<sup>2</sup> change = the incremental variance accounted for by the predictor variables entered at Step 2.

\*\*p < .01.

Table 8. Means and (Standard Deviations) of Study Variables across Domestic Violence Shelters.

<i>Variable</i>	<sup>a</sup> 1(n=13)	2(n=4)	3(n=5)	4(n=4)	5(n=11)	6(n=4)	7(n=5)	8(n=2)	9(n=3)
<i>Received Support</i>									
Directive Guidance	19.4 (13.27)	28.9 (3.31)	24.0 (13.93)	31.7 (15.18)	23.3 (11.74)	21.0 (15.64)	16.7 (4.11)	21.0 (1.41)	38.7 (11.50)
Collapsed Index (NSPSE)	21.0 (12.48)	26.5 (8.81)	17.8 (6.83)	29.0 (10.98)	19.5 (11.42)	23.0 (18.53)	19.0 (12.41)	36.5 (6.36)	30.0 (10.82)
Tangible Assistance	10.7 (7.32)	17.5 (9.0)	14.0 (8.06)	17.3 (10.05)	11.5 (5.41)	13.5 (7.85)	7.8 (2.59)	13.5 (4.95)	14.7 (5.51)
<i>Investment Model</i>									
Relationship Satisfaction	4.5 (7.09)	9.5 (7.51)	3.2 (3.63)	1.8 (2.87)	3.4 (5.24)	2.8 (3.59)	4.6 (6.84)	35.0 (4.25)	1.7 (2.89)
Quality Alternatives	19.8 (11.05)	21.5 (10.97)	22.0 (13.84)	15.5 (8.70)	24.6 (9.70)	19.3 (11.93)	14.6 (19.54)	10.0 (11.31)	14.0 (14.53)
Investments	17.4 (8.85)	29.8 (7.93)	7.8 (9.50)	12.3 (11.84)	16.5 (14.24)	19.0 (12.54)	27.4 (10.71)	36.5 (4.95)	6.7 (2.31)
Commitment	12.3 (13.84)	29.8 (22.13)	4.4 (5.41)	12.3 (9.88)	8.6 (8.02)	18.8 (13.94)	29.0 (19.80)	44.5 (4.95)	5.7 (5.51)

Note. Total N=51. <sup>a</sup>Numbers 1-9 denote different shelters in the central North Carolina area.

Table 8 Continued. Means and (Standard Deviations) of Study Variables across Domestic Violence Shelters.

Variable	<sup>a</sup> 1(n=13)	2(n=4)	3(n=5)	4(n=4)	5(n=11)	6(n=4)	7(n=5)	8(n=2)	9(n=3)
<i>Exposure to Abuse</i>									
Psychological Aggression	113.3 (47.26)	94.8 (30.26)	128.2 (35.24)	133.0 (59.87)	102.5 (55.53)	83.0 (59.16)	99.0 (59.02)	23.0 (12.73)	123.0 (58.13)
Physical Assault	73.3 (78.07)	104.3 (86.25)	152.4 (65.19)	144.3 (103.87)	111.6 (101.60)	97.0 (66.22)	43.2 (48.47)	25.5 (4.95)	173.7 (69.29)
Sexual Coercion	44.5 (30.45)	48.5 (27.60)	62.8 (25.22)	70.5 (53.48)	32.7 (40.70)	44.8 (42.97)	35.4 (53.91)	4.0 (5.66)	94.0 (38.31)
Injury	20.1 (26.23)	59.0 (63.79)	39.4 (17.90)	44.8 (40.16)	36.6 (29.83)	31.8 (33.94)	15.0 (14.09)	2.0 (2.83)	65.7 (37.45)
<i>Support Satisfaction</i>									
	18.6 (3.45)	17.3 (3.20)	14.2 (3.70)	19.0 (3.83)	16.6 (4.01)	13.5 (5.26)	14.6 (2.07)	16.0 (0.0)	20.0 (4.00)
<i>Supporter Intentions</i>									
	3.5 (1.05)	2.5 (1.0)	3.6 (1.34)	4.8 (.50)	4.6 (.81)	4.3 (.96)	3.0 (1.41)	2.0 (1.41)	4.3 (.58)
<i>Victim-Blame and Avoidance</i>									
Total score	8.8 (10.93)	10.5 (16.42)	18.6 (10.29)	16.5 (9.43)	10.9 (14.57)	7.3 (9.22)	14.4 (19.46)	14.5 (13.44)	2.3 (2.08)

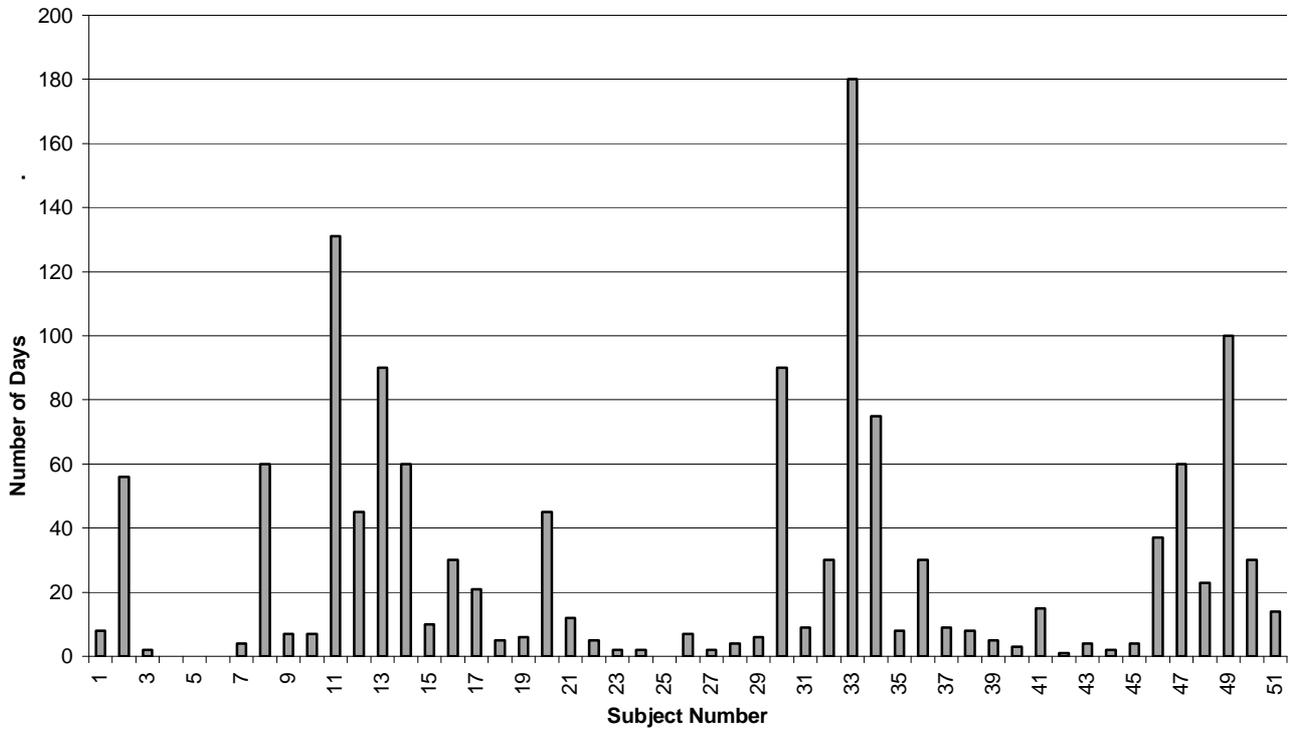
Note. Total N=51. <sup>a</sup>Numbers 1-9 denote different shelters in the central North Carolina area.

Table 9. Exploratory Analyses.

Variable	<u>b</u>	<u>SE b</u>	<u>B</u>	<u>R2</u>
<i>1. Does Directive Guidance mediate the relationship between Physical Assault and Commitment?</i>				
Step 1: Directive Guidance regressed on:				
Physical Assault	.04*	.02	.29*	.08
Step 2: Commitment (COM) regressed on:				
Physical Assault	-.06*	.03	-.30*	.09
Step 3: Commitment (COM) regressed on:				
Physical Assault and	-.05+	.03	-.27+	
Directive Guidance	-.12	.18	-.09	.10
<i>2. Does Directive Guidance mediate the relationship between Psychological Aggression and Commitment?</i>				
Step 1: Directive Guidance regressed on:				
Psychological Aggression	.09**	.03	.37**	.13
Step 2: Commitment (COM) regressed on:				
Psychological Aggression	-.09*	.04	-.31*	.09
Step 3: Commitment (COM) regressed on:				
Psychological Aggression	-.09+	.05	-.28+	
Directive Guidance	-.09	.19	-.07	.10
<i>3. Does Relationship Satisfaction mediate the relationship between Physical Assault and Commitment?</i>				
Step 1: Relationship Satisfaction (SAT) regressed on:				
Physical Assault	-.02	.01	-.23	.06
Step 2: Commitment (COM) regressed on:				
Physical Assault	-.06*	.03	-.30*	.09
Step 3: Commitment (COM) regressed on:				
Physical Assault and	-.03	.02	-.15	
Relationship Satisfaction (SAT)	1.20***	.20	.64***	.47
<i>4. Does Relationship Satisfaction mediate the relationship between Psychological Aggression and Commitment?</i>				
Step 1: Relationship Satisfaction (SAT) regressed on:				
Psychological Aggression	-.06*	.02	-.35**	.12
Step 2: Commitment (COM) regressed on:				
Psychological Aggression	-.09*	.04	-.31*	.09
Step 3: Commitment (COM) regressed on:				
Psychological Aggression	-.03	.03	-.08	
Relationship Satisfaction	1.21***	.21	.64***	.46

Note. N = 51. b = unstandardized regression coefficient. SE b = standard error of the unstandardized regression coefficient. B = standardized regression coefficient. R2 = the proportion of variance in the dependent variable accounted for by all the independent variables in the regression equation. + $p < .07$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Figure 1. Number of Days Spent at Shelter by Subject Number**



## Curriculum Vita

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Boston DVAMC/Boston Consortium

### **EDUCATION:**

**Ph.D. 2002** Virginia Polytechnic Institute and State University

Major: Clinical-Adult Psychology

Advisor: Dr. Danny Axsom

Dissertation Title: "Effect of Received Social Support on Women's Commitment to Their Abusive Relationships"

**M.S. 1998** Virginia Polytechnic Institute and State University

Major: Clinical-Adult Psychology

Advisor: Dr. Richard Eisler

Thesis Title: "Abused and Non-abused College Females' Causal Attributions to Verbally Abusive Boyfriend Behavior"

**B.A. 1991** The College of New Jersey

Major: English literature

Minor: Psychology and Women's Studies

### **TEACHING EXPERIENCE**

**7/00-8/00** **Graduate Instructor**  
Virginia Polytechnic Institute and State University

*Course Title:* Social Psychology

*Recipients:* Undergraduate students

**1/00-5/00**

**Graduate Instructor**

Virginia Polytechnic Institute and State University

*Course Title:* Abnormal Psychology

*Recipients:* Undergraduate students

**8/99-12/99**

**Graduate Instructor**

Virginia Polytechnic Institute and State University

*Course Title:* Personality Psychology

*Recipients:* Undergraduate students

**October 1998**

**Guest Lecturer**

Virginia Polytechnic Institute and State University

*Course Title:* Senior Seminar on Domestic Violence

*Recipients:* Undergraduate students

*Supervisor:* Dr. Richard Eisler

**9/97-5/98**

**Assessment Trainer**

Virginia Tech Psychological Services Center and Child Study Center

*Course Title:* Introduction to the WISC-III and WIAT

*Recipients:* Undergraduate psychology students

**8/96-5/97**

**Teaching Assistant**

Virginia Polytechnic Institute and State University

*Course Title:* Introductory Psychology

*Recipients:* Undergraduate students

*Supervisor:* Dr. Robin P. Cooper

**CLINICAL EXPERIENCE**

**September 2001-  
present**

**Psychology Intern**

The Boston Consortium in Clinical Psychology  
Boston, MA

Training experiences included the following rotations:

**1) National Center for Posttraumatic Stress Disorder**

*Duties:* Conducted outpatient PTSD assessments, executed empirically-validated treatments for PTSD and Borderline Personality Disorder, co-led stress management group, and conducted intake assessments in urgent care setting.

*Populations:* Male and female veteran outpatients

Supervisors: Drs. Phil Kleespies, Jeff Knight, Barbara Niles, and Amy Street

**2) Outpatient Clinic – Severe Mental Disorders track**

Duties: Conducted outpatient PTSD assessments, executed empirically-validated treatments for a variety of clinical disorders, conducted couples therapy with co-therapist, led groups for patients with severe mental illness, co-led support groups for chronic PTSD patients, and supervised masters level therapists.

Populations: Male and female veteran outpatients

Supervisors: Drs. Suzy Gulliver, James Munroe, Melissa Wattenberg, Barbara Wolfsdorf, and Rose Zimering

**3) Outpatient Clinic – Trauma track**

Duties: Conducted outpatient PTSD assessments, executed empirically-validated treatments for a variety of clinical disorders, conducted couples therapy with co-therapist, co-led groups for PTSD psychoeducation, mood management, and anxiety, co-led support groups for chronic PTSD patients, and supervised masters level therapists.

Populations: Male and female veteran outpatients

Supervisors: Drs. Suzy Gulliver, Lisa Fisher, James Munroe, Barbara Wolfsdorf, and Rose Zimering

**August 1996-  
May 2000**

**Psychology Trainee**

Psychological Services Center and Child Study Center of Virginia Tech Blacksburg, VA.

Duties: Conducted comprehensive psycho-educational assessments for school-age children and college students, conducted comprehensive personality assessments for adults, executed cognitive-behavioral treatments for variety of clinical disorders, conducted marital and family systems therapy, and supervised masters level student clinicians.

Populations: Mixed, adult and child outpatients

Supervisors: Drs. George A. Clum, Lee D. Cooper, Richard M. Eisler Thomas H. Ollendick

**October 1998-  
May 1999**

**Psychology Extern**

Veteran's Affairs Medical Center  
Salem, VA

Duties: Conducted intake assessments, executed cognitive-behavioral treatments with individual patients

Populations: Adult male and female veteran outpatients

Supervisor: Dr. M.K. Johnson

**June 1998-  
August 1998**

**Psychology Extern**  
Sierra Vista Hospital  
Sacramento, CA

Duties: Co-led cognitive relapse-prevention groups for substance abusers  
Populations: Adult male and female inpatients and outpatients  
Supervisor: Dr. Spencer Rosenberg

**June 1998-  
August 1998**

**Psychology Extern**  
Private Practice of Dr. Michael Elliott  
Auburn, CA

Duties: Led anger control groups for female domestic abusers  
Population: Court-mandated female outpatients  
Supervisor: Dr. Michael Elliott

**January 1998-  
May 1998**

**Volunteer Counselor**  
Women's Resource Center  
Radford, VA

Duties: Answered 24-hour abuse hotline calls  
Population: Battered women  
Supervisor: Mary Forti, M.S.W.

**June 1995-  
June 1996**

**Habilitation Aide I**  
Residential Services  
Carrboro, NC

Duties: Residential worker for developmentally disabled adults  
Population: Severely developmentally disabled adults

**September 1994-  
12/94**

**Teacher's Assistant**  
Dorothea Dix State Hospital  
Raleigh, NC

Duties: Taught basic academic skills to schizophrenic adults in supervised setting  
Population: Adult inpatients

**September 1994-  
December 1994**

**Peer Counselor**  
Women's Center  
Raleigh, NC

Duties: Provided counseling and information to women with various personal, financial, and legal problems  
Population: Adult women

**September 1993-  
October 1995**      **Crisis Line Counselor**  
HopeLine, Inc.  
Raleigh, NC  
*Duties:* Provided counseling and information to callers on 24-hour crisis  
hotline and trained new volunteers  
*Population:* All callers

## **ADMINISTRATIVE EXPERIENCE**

**1998**                      Student Representative to Clinical Faculty, Virginia Polytechnic Institute and  
State University Psychology Department

**1997-1999**              Graduate Clinic Assistant, Psychological Services Center and Child Study  
Center of Virginia Tech

## **MEMBERSHIPS**

American Psychological Association  
Student Member  
Member Division 35 of APA – Psychology of Women  
Association for the Advancement of Behavior Therapy  
Student Member

## **EDITORIAL EXPERIENCE**

1996-1998              Ad hoc Reviewer for Journal of Gender, Culture, and Health

## **RESEARCH EXPERIENCE**

**8/00-present**              Department of Psychology, Virginia Tech, Blacksburg, VA. Dissertation:  
“Effect of Received Social Support on Women’s Commitment to Their Abusive  
Relationship.” Duties: Proposed, designed, and ran an original project,  
defended before an ethics committee, entered and analyzed data using SPSS  
(Statistical Program for the Social Sciences).

**9/98-11/00**              Psychological Services Center, Virginia Tech, Blacksburg, VA. “Utilizing  
outcomes assessments in behavioral health care.” Duties: Contributed to  
conceptualization of an original project and creation of outcomes measure,  
supervised undergraduate research assistants in running of subjects and entering  
data, provided feedback to graduate clinicians on the effectiveness of their  
interventions.

**9/98-5/00**              Department of Psychology, Virginia Tech, Blacksburg, VA. “Attributional and  
physiological responses of abused females to negative female and abusive male  
behavior.” Duties: Contributed to conceptualization of an original project and  
development of audio-tape stimulus.

- 1/98-12/98** Department of Psychology, Virginia Tech, Blacksburg, VA. “Effects of level of self-esteem and female gender role perceptions on cognitive attributions about abusive behavior in courtship and dating.” Duties: Contributed to conceptualization of an original project and preparation of manuscript.
- 1/98-12/98** Department of Psychology, Virginia Tech, Blacksburg, VA. “Attributional and physiological responses of abusive males to intimate partner conflict.” Duties: Developed audio-tape stimulus, entered and analyzed data, and contributed to the preparation of manuscript.
- 1/97-11/98** Department of Psychology, Virginia Tech, Blacksburg, VA. Master’s Thesis: “Abused and non-abused college females’ causal attributions to verbally abusive boyfriend behavior.” Duties: Proposed, designed, and ran an original project, defended before an ethics committee, entered and analyzed data using SPSS (Statistical Program for the Social Sciences), trained and supervised undergraduate assistants (n=4) in data entry and running of subjects, and prepared manuscript.
- 9/95-5/96** Department of Psychology, University of North Carolina at Chapel Hill (UNC-CH) with Deidre Russell, M.S. Research area: Instructing fathers with developmentally delayed children. Duties: Coded behavioral interactions between father and his developmentally delayed child (ages 3-5) for later analysis.
- 5/95-5/96** Department of Psychology, UNC-CH with Dr. Frank Floyd, Ph.D. Family Interaction Project, part-time position. Duties: Coded family interactions during problem solving discussions using comprehensive coding system.
- 1/95-5/95** Department of Psychology, UNC-CH with Dr. Caryl Rusbult, Ph.D. Newlywed study, part-time position. Duties: Coded marital interactions during problem-solving discussions based on number of positive vs. negative exchanges, and entered data.

## **PUBLICATIONS**

Eisler, R.M., Franchina, J.J., Moore, T.M., Honeycutt, H.G., **Rhatigan, D.L.** (2000). Masculine gender role stress and intimate abuse: Effects of gender relevance of the conflict situation on men’s attributions and affective responses. *The Journal of Men and Masculinity*, (Vol. 1), p. 35-47.

## **MANUSCRIPTS IN PREPARATION**

Franchina, J.J., **Rhatigan, D.L.**, Eisler, R.M., & Doane, C.R. Effects of abusive male behavior and provocative female behavior on the attributions of FGRS women.

Franchina, J.J., Sachs, B.L. & **Rhatigan, D.L.** “Attributional and physiological responses of abused females to negative female and abusive male behavior.”

**Rhatigan, D.L.**, Eisler, R.M., & Franchina, J.J. “Effects of abuse history and provocative female behavior on women’s attributions about abusive male behavior.”

**Rhatigan, D.L.** & Axsom, D.K. “Women’s commitment to an abusive relationship: Toward an integrated theory of battered women’s stay/leave decisions.”

## INVITED ADDRESS

**Rhatigan, D.L.**, & Moore, T.M. (1998, April). Assessment and treatment of male batterers, Presented at the monthly interdisciplinary meeting of the Women’s Resource Center, Radford, VA.

## PRESENTATIONS

**Rhatigan, D.L.** & Axsom, D.K. (Nov. 2001). Effect of received social support on women’s commitment to their abusive relationship. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Philadelphia, PA.

**Rhatigan, D.L.** & Cooper, L.D. (Nov. 2000). Development of a brief outcomes assessment II: Validation, comparison, and client preferences. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, New Orleans, LA.

**Rhatigan, D.L.** & Cooper, L.D. (Nov. 1999). Utilizing outcomes assessments in behavioral health care. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

**Rhatigan, D.L.**, Moore, T.M., Eisler, R.M., & Franchina, J.J. (Nov. 1999). Effects of abuse history and provocative female verbal behavior on women’s attributions. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

**Rhatigan, D.L.**, Franchina, J.J., & Eisler, R.M. (Nov. 1999). Effects of feminine gender role stress and female provocativeness on women’s attributions about abusive male behavior. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

Chandler, H.K., **Rhatigan, D.L.**, Moore, T.M., & Eisler, R.M. (Nov. 1999). Effect of abuse history on women’s behavioral responses to male threat. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

Moore, T.M., Honeycutt, H.G., **Rhatigan, D.L.**, Eisler, R.M., & Franchina, J.J. (Nov. 1999). Effects of masculine relevance on men’s responses to intimate conflict situations. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

Copenhaver, M., Moore, T.M., **Rhatigan, D.L.**, & Eisler, R.M. (Nov. 1999). Testing a social-cognitive model of intimate abusiveness among substance dependent males. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

Moore, T.M., **Rhatigan, D.L.**, Cosenzo, K., & Eisler, R.M. (Nov. 1998). Attributional and physiological responses of abusive males to intimate partner conflict. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Washington, D.C.

**Rhatigan, D.L.** & Eisler, R.M. (April 1998). Abused and non-abused college females' cognitive attributions about heterosexual relationships: A preliminary analysis. Poster presented at the annual graduate and undergraduate research meeting at Virginia Polytechnic Institute and State University, Blacksburg, VA.

## **REFERENCES**

Danny K. Axsom, Ph.D., Associate Professor of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

George A. Clum, Ph.D., Full Professor of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

Lee D. Cooper, Ph.D., Director of Psychological Services Center, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

M.K. Johnson, Ph.D., Internship Director, VA-Medical Center, Salem, MHSL-Psychology (116B), Salem, VA 24153-6478