

A Preliminary Investigation of the Influence of Subjective Norms and Relationship Commitment on Stages of Change in Female Intimate Partner Violence Victims

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Abstract

Intimate partner violence (IPV) against women is a prevalent and serious problem throughout the world, causing devastating mental and physical health problems for victims. Recent research has begun to focus on factors that may influence women's decisions to stay or leave their abusive partners, as interventions for batterers has only resulted in minimal success in reducing IPV. Therefore, this study preliminarily examined the influence of women's perceptions of their social network members' subjective norms and their relationship commitment on stages of change to end an abusive relationship among a community sample of female IPV victims ($N = 84$). Results showed that subjective norms and women's relationship commitment were associated with women's stages of change. Relationship commitment

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did not mediate the relation between subjective norms and stages of change. These findings indicate that a number of factors contribute to women's stay/leave decision-making process, and close social network members could be included in interventions designed to keep women safe.

Keywords

domestic violence, intimate partner violence, stages of change, subjective norms

Intimate partner violence (IPV) is a serious problem throughout the world. Each year millions of women will be victimized by physical, psychological, and sexual aggression from an intimate partner (Archer, 2000; Tjaden & Thoennes, 2000), with numerous victims sustaining continued aggression for years (Bybee & Sullivan, 2005). Female victims of IPV are at an increased risk for developing mental health problems, such as posttraumatic stress disorder (Golding, 1999; Johnson & Zlotnick, 2009), depression (Anderson, Saunders, Mieko, Bybee, & Sullivan, 2003; Golding, 1999; Mechanic, Weaver, & Resick, 2008), and substance use disorders (Helfrich, Fujiura, & Rutkowski-Kmitta, 2008). Furthermore, female victims sustain numerous physical injuries as a result of their abuse (Archer, 2000).

Given the high rates of IPV against women and the associated mental and physical health problems for victims, it is imperative that research examine factors that influence women to stay or leave their relationship. Although it is our position that interventions should focus on individuals who perpetrate violence, and not those who sustain it, it is important that research examine factors associated with reduce abuse risk and relationship termination from the perspective of the victim (Rhatigan, Shorey, & Nathanson, 2011). Although terminating one's relationship does not always end one's risk for abuse (Anderson, 2003), and for some victims remaining in their relationship may be the best short-term course of action (Bell, Goodman, & Dutton, 2007), knowledge on factors that influence victims' decisions to stay or leave their relationship (herein referred to as stay/leave; Rhatigan & Axson, 2006) is important for individuals who work with victims (e.g., advocates) as this information may be used to help keep women safe (Cattaneo & Goodman, 2005; Goodman, Dutton, Vankos, & Weinfurt, 2005). Thus, this study preliminarily examined two intrapersonal factors that may be related to women's readiness to leave their abusive relationships. Specifically, we examined women's perception of their peers' beliefs about their relationship (subjective

norms), women's relationship commitment, and the association between subjective norms and relationship commitment to women's stages of change for stay/leave decision making.

Subjective Norms and Relationship Commitment

Social network members' subjective norms (herein referred to as "subjective norms"), in the context of romantic relationships, can be defined as "what a relationship participant believes others think about his or her relationship" (Etcheverry & Agnew, 2004, p. 411). According to Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA), subjective norms are an important determinant of intentions to perform some behavior. This is true regardless of how accurate the subjective norms are or how they were formed; it is the perception that an individual holds regarding subjective norms that is the important determinant of behavior (Etcheverry & Agnew, 2004; Fishbein & Ajzen, 1975). As outlined by TRA, and empirically demonstrated by numerous researchers (cf. Eagly & Chaiken, 1993), the intention to perform some behavior is one of the best predictors of actual behavioral engagement (Etcheverry & Agnew, 2004). Thus, subjective norms are personally held beliefs about one's social world, which influence individuals intentions, and thereby their behavior.

As applied to romantic relationships, subjective norms include an individual's belief that their social network members think they should continue their relationship and/or whether others are supportive of their romantic relationship. These beliefs have been shown to predict a number of relationship outcomes. Etcheverry and Agnew (2004), using a sample of college students, found that subjective norms were a significant predictor of one's commitment to their relationship. Furthermore, commitment to one's relationship partner was shown to mediate the relationship between subjective norms and remaining in a relationship approximately 8 months later. Using a different sample of college students, Etcheverry, Le, and Charania (2008) replicated the findings of Etcheverry and Agnew (2004). This line of research suggests that subjective norms are an important factor in predicting commitment to, and persistence of, a romantic relationship. Yet, because these studies utilized samples of college students and not those in violent relationships specifically, it is difficult to generalize these findings to IPV victims in the community. In fact, we are unaware of any research that has examined subjective norms on victim's commitment or intentions to stay or leave their relationship. However, researchers have discussed TRA as applied to victims of domestic violence and their relationship termination/continuation, proposing that it is a relevant

theory to apply to victims stay/leave decision-making process (Rhatigan, Street, & Axsom, 2006; Strube, 1988).

A few studies have examined how relationship commitment influences victim's intentions to stay or leave their relationship within the framework of the Investment Model (Rusbult, Martz, & Agnew, 1998). The Investment Model proposes that relationship commitment is derived by a combination of relationship satisfaction, quality of available alternatives outside one's relationship, and number of investments tied to the relationship (Rhatigan & Axsom, 2006; Rhatigan et al., 2006; Rusbult et al., 1998). Research using the Investment Model framework has shown that commitment, above and beyond other Investment Model variables, predicts intentions to leave an abusive partner among victimized women in dating relationships (Rhatigan & Street, 2005) and intentions to leave an abusive partner among women court-mandated to violence intervention programs (Rhatigan, Moore, & Stuart, 2005). Rusbult and Martz (1995) showed that commitment to one's relationship predicted relationship termination over a 1-year period of time among a shelter sample of battered women. Thus, there is evidence to suggest that relationship commitment predicts intentions to stay or leave one's partner and predicts relationship termination among victimized women. Still, no known research has examined whether relationship commitment mediates the relationship between subjective norms and intentions to stay or leave an abusive relationship.

Stages of Change

In the absence of information on whether women remained in or terminated their violent relationship, a number of proxy variables have been used to gauge women's level of readiness and/or intentions to leave their abusive partner (e.g., Rhatigan et al., 2005; Rhatigan & Street, 2005). Recently, research has focused on victim's stage of change as a potential indicator of readiness to leave their relationship. Stages of change, also known as the transtheoretical model of behavior change (TTM; Prochaska & DiClemente, 1982), contains five categories in which individuals may fall during a behavior change process, including precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1982). Precontemplation is the stage where individuals do not intend to take action to change a behavior in the near future; contemplation is the stage where individuals are intending to change some behavior within the next 6 months; preparation is the stage where individuals intend to take action very soon and often have a plan of action; the action stage is where individuals have made a behavior change;

and the maintenance stage is where individuals are working to prevent relapse into their old behaviors (Prochaska & DiClemente, 1982). The process of change, according to Prochaska and Diclemente (1982), is one that is cyclical, with individuals weaving between stages before making it to the maintenance stage of change (Prochaska & Velicer, 1997). Knowing which stage of change an individual is in can help tailor interventions for that person's level of readiness, as therapeutic techniques may differ by stage (Prochaska & Velicer, 1997).

As applied to women who have sustained IPV, a number of studies have demonstrated the usefulness of examining the stages of change in this population. For instance, research has shown that victims fall along the continuum of the stages of change (Bliss, Ogley-Oliver, Jackson, Harp, & Kaslow, 2008), suggesting that the transtheoretical model may be an appropriate paradigm for describing different levels of readiness in this population. In fact, a number of factors, including violence severity, mental health, and social support, have been shown to influence a woman's current stage of change (Alexander, Tracy, Radek, & Koverola, 2009). For example, Bliss et al. (2008) showed that posttraumatic stress disorder (PTSD) and substance abuse, as well as social support, were influential in predicting stages of change among a sample of African American abused women. Alexander et al. (2009), using a sample of abused women, demonstrated that being in a later stage of change was associated with being older, having a higher level of education, having a greater income, being African American, and being separated from their partner. Thus, studies have shown that a diverse set of factors are associated with women's stages of change.

To our knowledge, no known study has examined the relation of subjective norms or relationship commitment to IPV victim's stages of change. Knowing the influence of subjective norms and relationship commitment on women's stages of change for their relationship is important for understanding factors that contribute to women's stay/leave decision-making process. Moreover, researchers have advocated for interventions for female IPV victims to be tailored specifically for each individual woman's needs (Alexander et al., 2009), and this would be especially true depending on each woman's stage of change. In addition, because many women transition in and out of their abusive relationships (Bell et al., 2007), stages of change, which describe women's level of dedication to ending an abusive relationship, are a potentially valuable outcome variable because it may better predict long-term outcomes than women's momentary relationship status. Indeed, researchers have argued that women's relationship status at any single point in time is likely not the best indicator of one's risk for abuse or intention to stay or leave their partner (Bell et al., 2007; Rhatigan et al., 2011).

This Study

This study preliminarily examined female IPV victim's subjective norms, relationship commitment, and stages of change. Based on previous research (e.g., Etcheverry & Agnew, 2004; Rhatigan et al., 2005) and theory (Fishbein & Ajzen, 1975; Rusbult et al., 1998), the following were hypothesized: (1) women's subjective norms and relationship commitment would be associated with stages of change. That is, less positive subjective norms and less relationship commitment would be positively associated with stages of change; and (2) women's relationship commitment would mediate the relationship between subjective norms and stages of change.

Method

Procedures

Women were solicited through flyers located in the community of a large Southeastern city in the United States. Flyers indicated that women were being sought for participation in "The Women's Health Study," and flyers were placed at the city's domestic violence court, domestic violence shelters, local colleges, churches, and the YWCA. Interested women were instructed to call the research lab to learn more about the study and determine their eligibility. To be eligible, women had to be (1) 18 years of age or old, (2) in a current romantic relationship or separated from a romantic partner within the past 6 weeks (3) be able to speak and read English, and (4) had experienced at least one act of physical aggression from their current or recent romantic partner in the previous 6 months. Physical aggression was assessed using four items from the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, McCoy, & Sugarman, 1996), which included "having something thrown at you", "pushed, grabbed, or shoved you", "hit (or tried) to hit you", and "hit or tried to hit you with something hard."

All telephone screenings and assessments were conducted by PhD students in Clinical Psychology under the supervision of a PhD Clinical Psychologist. Women were asked to come to the research lab at a convenient time and were offered transportation and childcare if needed. Women first provided informed consent and then completed a number of semistructured interviews to assess for mental health problems (e.g., depression, substance use) with the student interviewer (discussed in a separate manuscript; Nathanson, Shorey, Tirone, & Rhatigan, 2012). After completing the semistructured interviews, women completed a packet of questionnaires in a

private room with the student interviewer present to answer any questions women had on the questionnaires. One woman required the interviewer to read each question to her. Completion of the initial assessment took approximately 3 hours and women were paid US\$100.00 for their participation. This level of compensation is similar to previous research with low-income community samples of female IPV victims (e.g., Beeble, Bybee, Sullivan, & Adams, 2009). Women were provided with a list of local referrals for domestic violence, substance use, and basic living needs at the end of their assessment. All study procedures were approved by the Institutional Review Board (IRB). The methods for the current study have been described elsewhere (Nathanson et al., 2012).

Participants

A total of 102 women participated in this study. Only women who completed all measures of interest were used for analyses. This resulted in a final sample of 84 women. The mean age of women was 34.39 ($SD = 11.32$) with the majority being non-Hispanic Caucasian (64.4%) and the remainder being African American (31%) and “other” (e.g., Hispanic; 4.6%). The majority of women were also unemployed (60.9%), with 17.2% being on disability, 13.8% employed full-time, and 8% employed part-time. The majority of women (64.3%) reported having an annual income of less than US\$5,200. Educationally, 26.4% of women had some high school education, 26.4% had a high school degree, 14.9% had a technical school degree, 24.1% had some college education, 2.3% had a bachelor’s degree, and 5.7% indicated “other” (e.g., Master’s degree). The average number of children each woman had was 1.93 ($SD = 1.51$). At the time of the study, 70.1% of the women reported being currently separated from their partner, 13.8% were married, 9.2% were engaged, and 6.9% were divorced. The mean length in months that women had been with their partner was 79.27 ($SD = 100.94$) and 32.2% of women were living with their partner at the time of the study. A number of women who reported being “separated” from their partner romantically were still living with this person at the time of the study (16.4%).

Measures

Intimate partner violence. The Revised Conflict Tactics Scales (CTS2; Straus et al., 1996), a 78-item self-report measure, was used to measure women’s experiences with IPV victimization. Women were instructed to indicate their frequency of psychological, physical, sexual, and injury

victimization during the previous 6 months. Women were instructed to limit their responses to their primary relationship partner, even if they were currently separated. Total scores were calculated by taking the midpoint for each response (e.g., a score of "4" for a response of 3-5 times) and then summing all scales, with scores for each item ranging from 0 to 25. There is a wealth of research that has supported both the reliability and the validity of the CTS2 across a wide range of populations (Vega & O'Leary, 2007). In this study, all victimization subscales were positively skewed and were log-transformed to reduce skewness before performing statistical analyses. For this study, internal consistency estimates were .83 (psychological aggression), .92 (physical aggression), .85 (sexual aggression), and .70 (injury).

Subjective norms. Women's perception of their social network members' subjective norms regarding their intimate relationship was assessed using a 4-item scale developed by Etcheverry and Agnew (2004). Example items included "this person(s) thinks I should continue in my current romantic relationship" and "this person(s) thinks my current romantic relationship is worth keeping." Items were rated on a 9-point scale (0 = do not agree at all; 8 = agree completely) and all items were summed to create an overall total score. Higher scores correspond to a perception that social network members are supportive of the relationship. Women were instructed to think of their two or three closest social network members when answering each question. Thus, women did not rate specific network members separately. This measure has demonstrated good internal consistency and predictive validity (Etcheverry & Agnew, 2004; Etcheverry et al., 2008). In this study, the internal consistency of this measure was .72.

Commitment. The Investment Model scale (Rusbult et al., 1998) was used to examine women's commitment to their partner. This self-report measure examines all four domains of the Investment Model, including satisfaction (five items; the rewards minus the costs of the relationship), investments (five items; magnitude and importance of psychological and material resources bound to the relationship), alternatives (five items; resources available outside of the relationship), and commitment (seven items; psychological/behavioral attachment and long-term orientation to the relationship; Rusbult et al., 1998). Women were instructed to limit their responses on this measure to their primary relationship partner, the same partner they answered questions about on the CTS2. Women answered each question on a 9-point scale (0 = do not agree at all; 8 = agree completely). Higher scores on all of the Investment Model subscales indicate greater commitment, satisfaction, investments, and alternatives, respectively. Previous research has shown the Investment Model scale to have good psychometric properties, including reliability and convergent

and discriminate validity (Rusbult et al., 1998). The Investment Model scale has also demonstrated good reliability in samples of IPV victims (e.g., Rhatigan & Axsom, 2006). In this study, internal consistency estimates were .92 (commitment), .83 (investments), .79 (alternatives), and .93 (satisfaction).

Stages of change. The Stage of Change in Relationship Status scale (SOCRS; Handsel, Ritter, Moore, & Rhatigan, 2012). was used to examine women's stages of change according to the TTM (Prochaska & DiClemente, 1982). The SOCRS is a 25-item self-report measure that assesses each stage of change, including precontemplation ("there is no need for me to do anything about my relationship"), contemplation ("sometimes I think I should end my relationship"), preparation ("I spoke with someone about ending my relationship"), action ("I have told my partner I am ending the relationship"), and maintenance ("I do not respond if my partner attempts to contact me"), in regard to staying or leaving a romantic relationship. Each subscale contains five items. The SOCRS was developed specifically for examining stay/leave decisions, not necessarily the cessation of violence, in romantic relationships according to the TTM, with confirmatory factor analyses (CFA) establishing each of the five factors. The SOCRS has shown good reliability and validity in studies of college students and has been shown to predict relationship termination across time (Handsel et al., 2012). Items were rated on a 9-point scale (0 = do not agree at all; 8 = agree completely). Total scores for each subscale are obtained by summing all items for each subscale, with higher scores corresponding to greater endorsement of a particular stage of change. For this study, internal consistency estimates were .70 (precontemplation), .87 (contemplation), .73 (preparation), .60 (action), and .87 (maintenance).

Results

Means, standard deviations, and score ranges among study variables are presented in Table 1. Results showed that the sample of women in this study sustained a substantial amount of abuse in the previous 6 months. Correlations among study variables are presented in Table 2. Subjective norms were positively associated with precontemplation, and negatively associated with contemplation, preparation, maintenance, and commitment. Subjective norms were negatively associated with psychological victimization, physical victimization, and injury. Commitment was positively associated with precontemplation, and negatively associated with contemplation, preparation, action, and maintenance. These findings are consistent with hypothesis 1, which proposed that subjective norms and relationship commitment would be associated with stages of change.

Table 1. Means, Standard Deviations, and Score Range of Study Variables

Variable	<i>M</i>	<i>SD</i>	Actual Range	Possible Range
Psychological victimization	70.36	47.82	1–200	0–200
Physical victimization	65.10	67.37	1–275	0–300
Sexual victimization	25.48	37.55	0–175	0–175
Injury victimization	15.73	19.79	0–97	0–150
Commitment	22.55	17.90	0–56	0–56
Investments	19.29	11.16	0–40	0–40
Alternatives	19.74	9.70	0–40	0–40
Satisfaction	8.26	9.75	0–40	0–40
Subjective norms	10.39	7.90	0–28	0–32
Precontemplation	9.32	8.60	0–31	0–40
Contemplation	30.02	10.84	0–40	0–40
Preparation	22.18	10.98	0–40	0–40
Action	23.45	11.37	0–40	0–40
Maintenance	22.37	13.31	0–40	0–40

Note: *M* = Mean; *SD* = Standard deviation. *N* = 84.

Next, we examined which stage of change women identified as being in at the time of the study. Women were categorized based on their highest score across the stages of change. When women had the same score on two stages of change, the stage of change that was further along the continuum was designated as the current stage of change, which is consistent with previous research on stages of change (e.g., Rollnick, Heather, Gold, & Hall, 1992). Results showed that 10.3% were in precontemplation, 60.9% contemplation, 4.6% preparation, 18.4% action, and 5.7% maintenance. Results showed that there were no significant difference in stage of change among women who were separated, engaged, married, or divorced from their intimate partner, $\chi^2(12) = 20.48, p > .05$. Women did not significantly differ in age, $F(4, 82) = .76, p > .05$, number of children, $F(4, 82) = .77, p > .05$, employment status, $\chi^2(9) = 16.46, p > .05$, or ethnicity, $\chi^2(15) = 21.65, p > .05$, across the stages of change. Furthermore, results showed women did not significantly differ on the frequency of physical, psychological, sexual, or injury victimization as a function of which stage of change they were in, $F(4, 80) = 1.13, p > .05$.

Mediation

Finally, we tested a mediational model using MacKinnon, Lockwood, Hoffman, West, and Sheets' (2002) recommendations for testing mediation.

Table 2. Bivariate Correlations among Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Psychological victimization	—	.73***	.48***	.55***	-.41***	-.19	.21*	.03	-.34**	-.25*	.41***	.29**	.31**	.23*
2. Physical victimization		—	.56***	.77***	-.38***	-.26*	.16	-.05	-.30**	-.17	.38***	.25*	.33**	.31**
3. Sexual victimization			—	.47***	-.08	-.16	.03	-.07	-.20	.05	.24*	.22*	.16	.21*
4. Injury victimization				—	-.36**	-.22*	.28**	-.05	.22*	-.08	.37***	.31**	.36**	.39***
5. Subjective norms					—	.35**	-.01	-.08	.29**	.42***	-.47***	-.27*	-.22*	-.27*
6. Commitment						—	.34**	-.14	.70***	.53***	-.57***	-.51***	-.58**	-.60***
7. Investments							—	-.08	.08	.17	.08	.10	-.02	.03
8. Alternatives								—	-.06	-.24*	.03	.09	.11	.14
9. Satisfaction									—	.59***	-.68***	-.48***	-.54***	-.43***
10. Precontemplation										—	-.56***	-.38***	-.52***	-.37***
11. Contemplation											—	.69***	.61***	.55***
12. Preparation												—	.66***	.69***
13. Action													—	.73***
14. Maintenance														—

* $p < .05$. ** $p < .01$. *** $p < .001$.

As detailed by MacKinnon et al. (2002), mediation is present if (a) the mediating variable (commitment) is predicted by the predictor variable (subjective norms), (b) the mediator variable predicts the dependent variable (stage of change) when controlling for the predictor variable, and (c) the predictor variable is not significantly associated to the dependent variable when the mediating variable is in the model. The significance of the indirect effect(s) is tested using the Z' formula derived by MacKinnon et al. (2002), which is similar to Sobel's formula (Sobel, 1982), which indicates that a critical, absolute value of 0.97 or greater is needed for a significant ($p < .05$) mediated effect. We also controlled for women's age, ethnicity, education level, relationship status, and violence victimization in all mediation analyses.

It should be noted that the requirement that the independent variable (subjective norms) be significantly associated with the dependent variable (stages of change) is not required by the MacKinnon et al. (2002) approach to mediation. This is because of the possibility of the combined effect of the mediated variable and the independent variable in predicting the dependent variable being different than either variable alone (see MacKinnon et al., 2002, for a detailed discussion). The MacKinnon et al. (2002) approach is a more stringent test of the indirect effects of mediation, has a better balance of Type I error, has greater statistical power, and has been shown to be the best approach when compared with 13 other methods for testing mediation (MacKinnon, Lockman, & Williams, 2004; Preacher & Hayes, 2004). To reduce multicollinearity among predictor variables, we mean centered all IVs prior to mediation analyses (Aiken & West, 1991). In addition, because of the low number of women who were classified into certain stages of change (i.e., action and maintenance), each stage of change was treated as a continuous variable in mediation analyses to increase power.

Precontemplation. The relation between the IV (subjective norms) and mediator (commitment) to stages of change and each other was established with the correlation analyses (see Table 2). Next, we ran two models. In the first model, subjective norms and all demographic and violence predictor variables were entered into a regression equation predicting each stage of change. In the second model, commitment was added as a predictor variable. As displayed in Table 3, both commitment and subjective norms were significantly associated with the precontemplation stage of change in the second model. Although this indicated that full mediation was not present, it was possible that partial mediation was occurring. However, the critical value for indirect effect did not reach significance ($Z' = .29$). Sexual victimization and an African American ethnicity were also associated with higher scores on this stage of change.

Table 3. Mediation Results

	Precontemplation <i>B</i> (SE)	Contemplation <i>B</i> (SE)	Preparation <i>B</i> (SE)	Action <i>B</i> (SE)	Maintenance <i>B</i> (SE)
Model 1	$F(8, 76) = 4.51^{***}$ ($R^2 = .32$)	$F(8, 76) = 7.52^{***}$ ($R^2 = .44$)	$F(8, 76) = 3.42^{***}$ ($R^2 = .26$)	$F(8, 76) = 3.04^{***}$ ($R^2 = .24$)	$F(8, 76) = 2.82^{***}$ ($R^2 = .23$)
Age	-.07 (.07)	.27 (.09)**	.25 (.10)*	.16 (.11)	.12 (.13)
Ethnicity	.24 (.70)*	-.13 (.80)	.01 (.93)	-.20 (.97)	-.09 (1.15)
Relationship status	.23 (.77)*	-.33 (.88)**	-.32 (1.03)**	-.17 (1.07)	-.18 (1.27)
Psychological victimization	-.10 (1.11)	.13 (1.27)	.14 (1.48)	.08 (1.54)	-.07 (1.83)
Physical victimization	-.11 (1.27)	.01 (1.44)	-.08 (1.68)	.04 (1.76)	-.07 (2.08)
Sexual victimization	.17 (.59)	.05 (.67)	.13 (.78)	-.09 (.82)	.04 (.97)
Injury victimization	.18 (.99)	.10 (1.13)	.17 (1.32)	.27 (1.38)	.36 (1.63)*
Subjective norms	.37 (.12)**	-.32 (.13)**	-.09 (.16)	-.07 (.16)	-.19 (.19)
Model 2	$F(9, 75) = 7.20^{***}$ ($R^2 = .46$)	$F(9, 75) = 9.69^{***}$ ($R^2 = .54$)	$F(9, 75) = 5.36^{***}$ ($R^2 = .39$)	$F(9, 75) = 6.67^{***}$ ($R^2 = .44$)	$F(9, 75) = 6.87^{***}$ ($R^2 = .45$)
Age	.03 (.07)	.17 (.08)	.15 (.09)	.03 (.09)	-.02 (.11)
Ethnicity	.21 (.63)*	-.11 (.73)	.03 (.86)	-.17 (.84)	-.05 (.98)
Relationship status	.14 (.71)	-.26 (.83)**	-.24 (.96)*	-.07 (.94)	-.07 (1.10)
Psychological victimization	-.14 (1.00)	.17 (1.16)	.18 (1.35)	.14 (1.33)	-.02 (1.55)
Physical victimization	-.03 (1.14)	-.05 (1.33)	-.15 (1.55)	-.05 (1.52)	-.16 (1.78)
Sexual victimization	.21 (.53)*	.02 (.62)	.10 (.72)	-.13 (.71)	.00 (.83)
Injury victimization	.17 (.89)	.11 (1.04)	.18 (1.21)	.28 (1.19)*	.36 (1.39)**
Subjective norms	.24 (.11)*	-.22 (.13)	.02 (.15)	.08 (.15)	-.03 (.17)
Commitment	.43 (.04)**	-.35 (.05)**	-.40 (.06)**	-.51 (.06)**	-.54 (.07)**

* $p < .05$. ** $p < .01$. *** $p < .001$.

Contemplation. As described earlier, the first model showed that subjective norms significantly predicted the mediating variable. The second model (Table 3) showed that subjective norms, and commitment were associated with the contemplation stage of change. The critical value for indirect effects ($Z' = .28$) showed that commitment did not partially mediate the relationship between subjective norms and contemplation. Being single was associated with reduced contemplation endorsement.

Preparation. The second model showed that only commitment was significantly associated with the preparation stage of change. Results of the indirect

effects test ($Z' = .22$) showed that commitment did not mediate the relationship between subjective norms and the preparation stage of change. Being single was associated with reduced preparation scores.

Action. The second model showed that commitment was associated with the action stage of change, but not subjective norms. Results of the indirect effects test ($Z' = .17$) showed that commitment did not mediate the relationship between subjective norms and the action stage of change. Injury victimization was also significantly associated with higher scores on the action stage.

Maintenance. The second model showed that commitment, but not subjective norms, was associated with this stage of change. Results of the indirect effects test ($Z' = .14$) showed that commitment did not mediate the relationship subjective norms and the maintenance stage of change. Injury victimization was significantly associated with higher scores on the maintenance stage.

Discussion

This study examined female IPV victims' subjective norms, relationship commitment, and stages of change. To our knowledge, this was the first study to examine how subjective norms and relationship commitment were associated with stages of change in IPV victims, as well as whether commitment mediated the relationship between subjective norms and stages of change. Although preliminary, our results demonstrated a number of significant relations between subjective norms, relationship commitment, and stages of change, which may provide important information for interventions with IPV victims and future research.

Our first hypothesis stated that both relationship commitment and subjective norms would be associated with women's stages of change. Results demonstrated support for this hypothesis, with increased commitment being associated with increases in the precontemplation stages of change and decreases in all other stages of change. The same pattern of findings held true for subjective norms, with more positive relationship norms being associated with increased precontemplation and decreases in all other stages of change, except the action stage. Results from the mediation analyses also suggested that subjective norms may be more influential in the earlier stages of change (precontemplation and contemplation) than later stages of change. Although these findings are not surprising, they speak to the importance of considering multiple factors that may affect women's stages of change. Moreover, this is the first known study to demonstrate relations between subjective norms and relationship commitment within a sample of female IPV victims. In addition, subjective norms were associated with increased relationship satisfaction to

one's abusive partner. As discussed in more detail later (see clinical implications), these findings speak to the importance of interventions for abused women potentially including social network members in their programs given the strong influence of social network members in the lives of victims.

Our results did not support our second hypothesis, which stated that commitment would mediate the association between subjective norms and stages of change. Rather, results demonstrated that subjective norms and commitment were both associated with the precontemplation and contemplation stages of change, and only commitment was associated with the later stages of change (preparation, action, and maintenance). These findings were found even after controlling for IPV victimization and a range of demographic variables. This suggests that, irrespective of subjective norms and level of violence, commitment to one's partner is an important determinant of whether women are preparing for, or actually engaging in, behaviors related to leaving their abusive partner. In addition, subjective norms may be more influential during earlier stages of change. Although social networks are highly influential in IPV victims' lives, the decision to stay or leave an abusive relationship is a highly personal decision, and one that may be less amenable to social network member's beliefs during later stages of change. Moreover, sustaining injuries from one's partner was associated with increases in the action and maintenance stages of change, which could indicate that more severe violence is a factor women consider when deciding whether to stay or leave their relationship. In addition, the contemplation and preparation stages of change were associated with being separated from one's partner. These findings support the notion that relationship status may not be the best indicator of whether women will stay or leave their partner, as many women may still be contemplating staying or leaving their partner even while "separated" from that partner. These results should be considered preliminary, however, until replicated.

It should be noted that while commitment and subjective norms accounted for a fairly large percentage of the variance in each stage of change (see Table 3), there is still considerable variance left in predicting stages of change. Thus, future research would benefit from examining additional variables in predicting stages of change. For instance, mental health variables have been shown to be an important predictor of stages of change (Alexander et al., 2009) and have also been shown to affect relationship commitment (Rhatigan et al., 2011). A number of other variables, such as access to housing, age of children, shame and/or guilt associated with abuse, and fear of one's partner, for example, may also be important factors in women's stage of change. Future research would benefit from examining how these variables impact stages of change.

Clinical Implications

Findings from this study may have important clinical implications for individuals who work with IPV victims. Interventions with female IPV victims may benefit from including important social network members when helping women determine whether they should stay or leave their partner. In addition, therapeutic interventions that involve social networks may be used to encourage network members to support women regardless of their decision to stay or leave their partner, which may help victims harbor less fear of stigmatization if their efforts to leave their partner are unsuccessful, or if women decide to remain with their partner. Promoting a nonjudgmental and emotionally supportive relationship between victims and their support network may increase the impact of subjective norms on stages of change. Indeed, research has shown that battered women often seek help and assistance from their social network members before seeking help from professionals (Rose, Campbell, & Kub, 2000) and social support can help ameliorate the negative effects of abuse (Beeble et al., 2009; Coker et al., 2002). Therefore, in combination with research on social support, our findings suggest that including social network members in interventions designed for IPV victims may be an important and productive area of focus.

Findings from this study also speak to the importance of examining women's stage of change and potentially tailoring interventions for each woman and her specific stage of change. Depending on the stage of change a woman currently finds herself, the process of helping women decide how to proceed in their relationship will look qualitatively different. Interventions for female IPV victims could use techniques drawn from Motivational Interviewing (MI; Miller & Rollnick, 2002) to help women take action and progress through the stages of change. For instance, DiClemente and Velasquez (2002) outline the specific MI techniques that could be used for each stage of change, as each stage of change presents different obstacles to behavior change. Because MI is a nonconfrontational, supportive, emphatic, and collaborative approach, which is also designed to increase self-efficacy (Miller & Rollnick, 2002), this approach may be particularly well-suited for empowering victims to make the best decisions for themselves. For instance, Rasmussen, Hughes, and Murray (2008) implemented an MI intervention to a sample of battered women seeking help from a domestic violence shelter, with results showing that the MI intervention increased women's readiness to terminate their abusive relationship. Individuals who work with victims should keep in mind, though, that ending an abusive relationship has numerous obstacles, often results in increased frequency and severity of abuse, and may not be the best

decision for every woman at a particular point in time. Thus, it is our belief that one should not advocate for a particular relationship behavior (i.e., stay or leave) but should support women's self-efficacy and meet women at their particular stage of change.

For example, women in the precontemplation stage of change concerning their abusive relationship may benefit from MI techniques that help them evaluate how they can attempt to remain safe while with their partner, such as by trying to avoid their partner after he/she has consumed alcohol or drugs or during certain periods when violence occurs more often. This type of approach will need to be delicately handled as to not imply blame on victims for the abuse, rather helping women see that there are factors that increase their partner's chances of perpetrating aggression and that they may be able to reduce their risk of experiencing aggression by not being around their partner at these times. Safety planning, which is a commonly used intervention with women who are abused, may be more effective through a collaborative, MI approach with women who are in the precontemplation or contemplation stage of change.

Limitations and Directions for Future Research

When interpreting the findings from this study it is important to consider its limitations. First, the cross-sectional design of this study precludes the determination of causality among study variables despite causal assumptions. Thus, longitudinal research is needed to determine if subjective norms and relationship commitment predict stages of change across time and if stages of change predict relationship behaviors (i.e., termination). The measure of subjective norms asked participants to think about their two or three closest network members when responding to norm questions, and did not separate individual network members. Results may have varied depending on the norms of specific network members, who the social network member was (i.e., family vs. friends), and on how often they interacted with each social network member. We also only examined one aspect of RSA, subjective norms, and not women's outcome expectancies/intentions to engage in a specific behavior, which is an important component of the overall RSA theory (Fishbein & Ajzen, 1975). Future research should examine all components of this theory. In addition, it may be important for future research to examine attitudes toward violence and acceptance of violence as normative among important social network members, as these beliefs may impact subjective norms.

The women used in this study represent a frequently abused sample of women who volunteered for this study, which limits the generalizability of the findings. It is possible that women who volunteered for a "health study"

may be different on important variables (e.g., violence victimization) from community women who did not volunteer for the study. In addition, the relatively small sample size did not allow for more complex statistical techniques, such as Structural Equation Modeling. Moreover, it is possible that the small sample size, and thus a small number of women in each stage of change, may have precluded the finding of significant effects. However, given the preliminary nature of this study, a large sample size was not necessarily warranted. Still, future research would benefit from larger sample sizes to conduct more complex and sophisticated analyses.

In summary, findings from this study provide preliminary support for the importance of examining subjective norms and relationship commitment on stages of change among female IPV victims. Results demonstrated that both subjective norms and relationship commitment had independent effects on the precontemplation and contemplation stages of change, with commitment being an important predictor for the preparation, action, and maintenance stages of change. In combination with previous research on IPV victims, these findings indicate a number of factors are associated with women's stages of change, which may have important implications for interventions with IPV victims. Continued research is needed that examines additional factors that may contribute to stages of change among IPV victims.

Authors' Note

This manuscript is dedicated to Dr. Deborah L. Rhatigan. Her expertise and desire to help victims of domestic violence were an inspiration to many and made this manuscript possible. She will be forever loved and deeply missed.

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