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Women Who Use Domestic Violence Shelters: *Changes in Depression Over Time*

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What is This?

WOMEN WHO USE DOMESTIC VIOLENCE SHELTERS

Changes in Depression Over Time

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This study examined the levels of depression reported by women who had used a domestic violence shelter. Depressive symptoms were assessed three times: immediately after shelter exit, 10 weeks thereafter, and 6 months later. Whereas 83% of the women reported at least mild depression on the Center for Epidemiological Studies Depression (CES-D) scale upon shelter exit, only 58% were depressed 10 weeks later. This did not change at the 6-month follow-up. An ecological, longitudinal model was evaluated to predict battered women's depression 8½ months postshelter exit. Results of hierarchical regression analyses suggested that, after controlling for previous levels of depression, the women's feelings of powerlessness, experience of abuse, and decreased social support contributed to their depression symptoms. The women's scores on these three variables (feelings of powerlessness, abuse, and social support) at 10 weeks postshelter exit and at 6-month follow-up predicted depression at 6 months. Thus, there were both predictive and concurrent effects for these constructs. Implications for clinical and community interventions are discussed.

Both anecdotal and scientific evidence indicate that women who are battered by their intimate male partners have moderate to high levels of depression (Browne, 1987; Campbell, 1989; Cascardi & O'Leary, 1992; Follingstad, Brennen, Hause, Polek, & Rutledge, 1991; Gelles & Harrop,

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1989; Gleason, 1993; Jaffe, Wolfe, Wilson, & Zak, 1986; Mitchell & Hodson, 1983; Rounsaville, 1978; Rounsaville & Weissman, 1977–1978; Walker, 1979, 1984). In light of the physical, emotional, and sexual abuse women sustain, it is not surprising they experience psychological distress. Yet, many researchers either explicitly or implicitly suggest that such depression is more a characterological factor than an environmental stressor (Gellen, Hoffman, Jones, & Stone, 1984; Gleason, 1993; Rhodes, 1992). Others adopt a more ecological approach, emphasizing the link between the stress of abuse and depression in battered women's lives (Carmen, Russo, & Miller, 1981; Mitchell & Hodson, 1983). Resolution of this debate in the literature has been further curtailed by the extensive use of cross-sectional research, which cannot reveal possible relationships between changing environmental factors and depression. The current study utilized a longitudinal design to examine changes in depression over time, and to evaluate a model predicting long-term depression in women who had been abused by their intimate partners.

Prevalence of Depression Among Battered Women

Across studies, samples, and sampling methodologies, battered women have been reported to have moderate to high levels of depression (see Table 1). Yet, it is important to note the *context* of much of this work: women were often surveyed while they were in crisis (e.g., in shelters, at emergency rooms). If women are at a shelter, domestic violence community agency, or emergency room it is quite likely they have been abused within the last few hours and were frightened enough to leave their homes. In this state of desperation and need, it would be expected that many would be depressed. Consequently, this suggests that any generalizations about the depression levels of women with abusive partners based on samples of women in immediate crisis would be erroneous. It is imperative to investigate how battered women's depression levels change (or do not change) after they leave shelters and after the crisis in their lives has somewhat abated.

Predicting Battered Women's Depression

Existing research has substantiated that women who have been recently battered are depressed, but for developing both effective clinical and community interventions, understanding what factors are related to and/or predict their psychological distress is necessary. Previous studies have established links between depression and self-esteem (Campbell, 1989; Cascardi & O'Leary, 1992; Mitchell & Hodson, 1983; Rhodes, 1992; Sato & Heiby, 1992; Walker, 1984), feelings of control and powerlessness (Campbell, 1989; Walker, 1984), abuse sustained (Cascardi & O'Leary,

1992; Mitchell & Hodson, 1983; Sato & Heiby, 1992; Straus, 1987; Walker, 1984), social support (Mitchell & Hodson, 1983; Sato & Heiby, 1992), relationship with the assailant (Walker, 1984), and income, employment, and education (Mitchell & Hodson, 1983; Walker, 1984). Thus, *at any given period of time*, both intraindividual variables, such as self-esteem, and more contextual variables, such as social support, are related to battered women's depression. For preventive interventions, however, moving beyond a cross-sectional, correlational approach is needed to consider long-term models predicting depression.

Constructing a predictive model of depression from an ecological perspective necessitates focusing on the context of battered women's lives, particularly aspects of the abusive relationship and the women's social environments. First, many researchers have noted that violent relationships are characterized by extreme imbalances in power and control between partners (Browne, 1987; Dobash, Dobash, & Cavanaugh, 1985; Frieze & Browne, 1989; Hilberman & Munson, 1977–1978; Homer, Leonard, & Taylor, 1985; Walker, 1979, 1984). Assailants often control the lives of their partners, dictating day-to-day activities (e.g., where to go, what to eat) as well as major personal choices (e.g., careers). Women with abusive partners have reported feelings of powerlessness and loss of control over their lives (see Walker, 1984), and within the culture of the abusive relationship, such feelings seem normative. Research on nonbattered populations indicates that feelings of powerlessness are linked to depression (see Mirowsky & Ross, 1989). By extension, the dynamics of abusive relationships and the powerlessness they instill would be expected to be related to depression in battered women. The longitudinal effects of feelings of powerlessness and loss of control have not been evaluated, but both within-time and across-time effects are possible.

A second feature of the abusive relationship that may be related to depressive symptoms is the violence itself. Both the physical and psychological stress of being harmed by an intimate partner would be expected to lead to feelings of depression. Existing research has found that as abuse escalates, so too does depression. In a national epidemiological study, Straus (1987) reported that women who were "severely assaulted" had much higher rates of psychological distress, including four times the rate of feeling depressed. Moreover, research on rape victims has suggested that the effects of male violence against women may have long-term effects on their psychological well-being (Frieze, Hymer, & Greenberg, 1987; Hanson, 1990; Resick, 1987, 1990; Roth & Lebowitz, 1988). Consequently, both previous levels of abuse as well as the current level of violence the women are subjected to may impact their psychological well-being.

Finally, turning to the larger social environments of battered women, the social support they have in their lives may be related to their experience of depressive symptoms. Researchers have generally concluded that

Table 1

Summary of major studies assessing depression in battered women

Investigators	Sample	Sample Size	Measure of Depression	Major Findings
Back, Post, & D'Arcy 1982	Battered women in short-term psychiatric hospital	30	DSM-III diagnosis of depression/affective disorder	10% were diagnosed with affective disorder
Campbell 1989	Battered women in the community; 24% were shelter residents	97	Beck Depression Inventory	Mean BDI = 17.7 (mild to moderate depression); battered women more depressed than nonbattered
Cascardi & O'Leary 1992	Currently battered women who sought help from community domestic violence agency	33	Beck Depression Inventory	52% had mean BDI score > 20 (severe depression) and 70% had mean BDI score > 14 (mild to moderate depression)
Follingstad, Brennen, Hause, Polek, & Rutledge 1991	Women recruited from a domestic violence shelter and other sources	234	Women reported whether they were experiencing depression	77% of the women experienced depression
Gellen, Hoffman, Jones, & Stone 1984	Abused women in residential treatment for "distressed women"	10	MMPI	Battered women were higher on depression scale compared to nonbattered women
Gelles & Harrop 1989	Women currently or previously involved with men	3,002	Psychiatric Evaluation Research Interview	38% of the women experiencing severe violence were depressed; 21% of the women experiencing minor violence were depressed

Study	Sample description	N	Measure	Findings
Gleason 1993	Battered women residing in a shelter and women receiving assistance from a shelter, but not living there	62	Diagnostic Interview Schedule	63% of the women residing in the shelter were depressed; 81% of the women not residing in the shelter were depressed
Hilberman & Munson 1977–1978	Women referred to a rural health clinic for psychiatric evaluation	60	Past psychiatric diagnoses	Nine women had "classic depressive illness"
Jaffe, Wolfe, Wilson, & Zak 1986	Battered women in shelters	56	General Health Questionnaire	Battered women were more depressed (mean = 5.15) than nonbattered women
Mitchell & Hodson 1983	Battered women in shelters	60	Brief Symptom Inventory	Mean BSI = 2.15, which is 2 SD above norm, and is close to the mean of psychiatric patients
Rhodes 1992	Battered women who sought help from outpatient domestic violence clinic	46	MMPI	Battered women were higher on self- and social alienation than nonbattered women (i.e., experienced depression, guilt, and low self-esteem)
Rounsaville 1978	Battered women recruited from emergency room and community mental health clinics	31	Center for Epidemiological Studies Depression Scale	80% of the women had "substantial levels of depression" and 20% had depression near hospitalization levels
Rounsaville & Weissman 1977	Battered women recruited from emergency rooms	37	Center for Epidemiological Studies Depression Scale and DSM II	37% of the women had depressive neurosis and 10% had depression with alcohol abuse

Table 1

Continued

Investigators	Sample	Sample Size	Measure of Depression	Major Findings
Sato & Heiby 1992	Women in battered women's groups and shelters	136	Self-Rating Depression Scale	47% of the women had clinical levels of depression
Walker 1984	Battered women from shelters, community agencies, public advertising	400	Center for Epidemiological Studies Depression Scale	Mean CES-D = 18.19 (upper end of mild depression) (twice as high as CES-D epidemiological studies)

Note: Design of all studies was cross-sectional.

the level of social support available to people experiencing change or stress may impact their subsequent adaptation, with the presence of a strong social support system linked to psychological well-being (Aneshensel & Frerichs, 1982; Bell, Leroy, & Stephenson, 1982; Billings & Moos, 1981; Bloom, 1992; Cohen & Hoberman, 1983; Cohen & Wills, 1985; Gottlieb, 1981; House & Kahn, 1985; Kessler & McLeod, 1985; Mitchell & Hodson, 1983; Turner, 1983; Wilcox, 1981; Williams, Ware, & Donald, 1981). Both a direct effect of social support on psychological functioning has been substantiated (Cohen & Hoberman, 1983; Cohen & Syme, 1985; Cohen & Wills, 1985; Menaghan, 1990; Wilcox, 1981), as well as an interactive, or buffering, effect (Cohen & Hoberman, 1983; Wilcox, 1981). Among women with abusive partners, social support may play an important role in how they are able to respond to the stress of the abusive relationship and violence experienced. Mitchell and Hodson (1983) found that increased supportive responses from informal sources of support (e.g., family and friends) were related to psychological adjustment of battered women. The impact of social support across time, however, has not been explored. Both previous and current levels of social support may help women cope with the stress in their lives, easing their psychological distress.

THE CURRENT RESEARCH

There are two overall problems with previous research that have limited our understanding of battered women's experiences of depression. First, research designs used to date have been cross-sectional, so information on battered women's depression over time has not been available. A further complication is that these cross-sectional designs have been used primarily with shelter samples or other "in crisis" samples, which presents a picture of battered women's mental health during a crisis in their lives. For both therapeutic and policy interventions, it is crucial to know how this depression changes (if it does at all) with time (Koss, 1990; Mitchell & Hodson, 1983). After the crisis and the immediate effects of abuse recede, so too may depression.

The second limitation of previous research is that although existing research has examined a variety of factors related to depression, an integrated, ecological model predicting depression has not been developed and evaluated. The focus of many studies has been on intraindividual variables (e.g., self-esteem), with less emphasis on the larger context of women's lives. Additionally, the longitudinal effects of environmentally based variables have not been explored.

The purpose of the current research was to expand previous work in these two domains. First, a longitudinal design was used to examine the levels of battered women's depression over three time periods: immediately *after* their exit from a shelter, 10 weeks thereafter, and again 6

months later. Second, an ecological model predicting long-term depression
in women with abusive partners was evaluated. The women's feelings of
powerlessness from the abusive relationship and the abuse they had en-
dured were expected to be positively related to depression symptoms; the
social support available to the women was expected to curtail depression
(i.e., be negatively related). These patterns were expected to be consistent
both within and across time periods studied.

This study is part of a larger project that evaluated the longitudinal
effects of an advocacy intervention program for women with abusive part-
ners (Sullivan, Basta, Tan, & Davidson, 1992; Sullivan, Campbell, Angel-
ique, Eby, & Davidson, 1994; Sullivan, Tan, Basta, Rumptz, & Davidson,
1992). The intervention involved randomly assigning half of the research
participants to receive the free services of an advocate for the first 10
weeks postshelter. The purpose of the current work was not to evaluate
this intervention (see Sullivan, Tan, Basta, Rumptz, & Davidson, 1992 for
the effects of the intervention); rather, the aim was to explore how depres-
sion changes over the first 8½ months postshelter in a sample of women
who had used a shelter for battered women.

METHOD

Research Participants

Research participants were recruited from a domestic violence shelter lo-
cated in a medium-sized, Midwestern city. All women who stayed at least
one night at the shelter and who intended to stay in the general vicinity
were told about the project, regardless of whether they intended to return
to their assailants. Residents were told that, should they agree to partici-
pate, they would be interviewed six times after their shelter exit — immedi-
ately upon exit, 10 weeks thereafter, and at 6, 12, 18, and 24 months
postintervention. Women were also told that half of the participants
would receive the free services of trained advocates for 4 to 6 hr per week
during the first 10 weeks after leaving the shelter. All women were paid
for participating in interviews ($10, $40, $60, $80, $90, and $100, respec-
tively).

Most eligible participants (93%) expressed interest in participating in
the study. Of the 146 initial study participants, 4 women ended their
participation within the first 2 weeks, and 1 woman was murdered 1 week
into her intervention. Results are based on the remaining 141 participants.
Two of the women were dropped as outliers from the regression analyses,
but are included in the demographic information. Both women exhibited
signs of mental illness, which interfered with their ability to answer cer-
tain questions. One experienced active hallucinations and believed her
assailant tormented her through her brain waves, and the other was men-

Table 2

Descriptive information on the sample

Variable	Shelter Exit (N = 139)	10 Weeks Later (N = 132)	6-Month Follow-up (N = 129)
Race			
White	45		
Black	43		
Hispanic	8		
Asian American	1		
Others	3		
Education level			
Less than high school	36		
High school grad/GED	30		
Some college	24		
College graduate	5		
Trade school	4		
Professional degree	1		
At least one child living with her	79	78	80
Employed	17	23	32
Mean monthly income	$958		$752
Receiving govt. assistance	81	78	75
Below poverty level	60		74
Currently a student	11	20	22
Relationship status			
Married, living together	34		16
Married, separated	6		19
Divorced	1		5
Girl/boyfriend, living together	45		5
Girl/boyfriend, not living together	5		6
Ex-girl/boyfriend	7		46
Dating, but not in relationship	1		2
Others	1		1
Involved with assailant	34	41	33

Note: Values equal percentages unless otherwise noted.

tally confused to the point of being unable to provide consistent information.

Where possible, project interviews were conducted in person in the community, most often in women's homes. Women who had moved out of the general area were interviewed over the telephone. Interviewers were project staff or trained undergraduates who received extensive training in return for college credits.

Demographics.   Table 2 presents a summary of the sample characteristics. Forty-five percent of the study participants were White, 43% were Black, 8% were Hispanic (mostly Mexican American), and 1% were Asian American. Most of the women had limited economic resources as 60% lived below the federal poverty line (Bureau of Census, 1990), and 81% were receiving governmental assistance. Before arriving at the shelter, 34% of the women had been married to and living with their assailants. An additional 45% had been living with their assailants, but were not married. Six percent of the women were involved with their assailants but not living together, and 15% were no longer involved with their partner at the time of the last assault (either separated, divorced, or no longer involved). The participants were demographically similar to the samples of other studies (Berk, Newton, & Berk, 1986; Finn, 1985; Gondolf, 1988; Greaves, Heapy, & Wylie, 1988; Hilbert & Hilbert, 1984; Mitchell & Hodson, 1983; Okun, 1986; Pagelow, 1981; Schutte, Malouff, & Doyle, 1988; Stacey & Shupe, 1983), indicating they were representative of women who utilize domestic violence shelters.

Retention Rate

Tracking women during the first 6 months postintervention was highly successful, resulting in a 93% retention rate. The procedures involved in tracking participants through time can be found in Rumptz, Sullivan, Davidson, and Basta (1991). Of the 10 participants who were not interviewed at 6 months, 3 informed the project they were no longer interested in being interviewed, and the project has reason to believe, but cannot positively confirm, that 2 of the women were murdered. Five women could not be located, despite intensive tracking efforts. The demographics of these 10 cases were comparable to the rest of the sample in terms of age, race, relationship status, and number of children.

Measures

The study employed preexisting measures as well as those created specifically for the research project. For the current report, four measures were analyzed. First, *depression* was assessed by the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977), a self-report checklist of psychological distress within the general population (coefficient α = .88). This measure contains 20 items that assess the degree to which people experienced symptoms of depression within the past week (e.g., "I was bothered by things that usually don't bother me," "I felt that everything I did was an effort"). The women rated how much they experienced each symptom on a 0 (*rarely or never*) to 3 (*most or all of the time*) scale. For determining levels of depression, the scores were summed (four were

reverse-scored) and the following criteria were implemented: scores 0–15.5 indicate no depression, scores 16–20.5 indicate mild depression, and scores 31 and higher indicate severe depression (Radloff, 1977).

Feelings of *powerlessness* and *loss of control* were measured by Levenson's (1972) Internal–Powerful Others–Chance (IPC) scale, which has been used in prior research with battered women. The Internal subscale of this scale was dropped from analyses because of low internal reliability. The Powerful Others subscale was combined with the Chance subscale (because of high intercorrelations) to create a 16-item External subscale, with $\alpha = .83$ and item-total correlations ranging from .24 to .56.

Experience of physical *abuse* was measured by a modified version of Straus's (1979) Conflict–Tactics Scale Violence subscale, found in this study to have an internal consistency of .90 (item-total correlations ranged from .53 to .81). Two items were dropped ("burned" and "drove recklessly so that you felt endangered") because of lack of variance. The women reported how frequently they were subjected to acts of physical violence on a 1–6 scale (1 = *never;* 2 = *once a month or less;* 3 = *two or three times a month or less;* 4 = *once or twice a week;* 5 = *three or four times a week;* 6 = *more than four times a week*). The mean frequency was computed for the 15 remaining items to be used in the analyses.

Finally, *social support* was measured by a scale developed by Bogat, Chin, Sabbath, and Schwartz (1983), which has a coefficient alpha of .87 (item-total correlations ranged from .57 to .78). This instrument measured the perceived quantity and quality of women's overall social support, as well as specific domains of support: companionship, advice and information, practical assistance, and emotional support.

RESULTS

Depression Over Time

To determine whether women's experiences of depression changed during the first 8½ months postshelter exit, a repeated measures analysis of variance was performed using one dependent variable (CES-D mean scores) and three time periods (shelter exit, 10-week follow-up, 6-month follow-up). The effect was significant, indicating significant change over time ($F(2, 127) = 27.542, p < .001, \omega^2 = .19$). Examination of the time effects confirmed that depression significantly decreased from shelter exit to 10 weeks later ($F(1, 131) = 45.653, p < .001$), and then leveled off at 6-month follow-up (CES-D means 26.42 [$SD = 12.12$], 19.29 [$SD = 11.22$], and 19.47 [$SD = 10.38$], respectively).

Overall, women's depression decreased over time, but because many women were no longer being physically assaulted by their partners at the 10-week post- and 6-month follow-up time periods, depression rates were

examined separately for women who were still being assaulted and those who were not. Table 3 summarizes these percentages. At shelter exit, when all of the women had recently experienced physical abuse, 83% of the women were at least mildly depressed: 17% experienced no depression at all, but 19% experienced mild depression, 28% moderate depression, and 36% severe depression. Ten weeks later, however, 45% of the women had been recently physically abused, and of those abused women 32% experienced no depression at all, 10% mild depression, 38% moderate depression, and 20% severe depression. Of the 55% of the women not abused at the 10-week interview, 50% experienced no depression, 24% mild depression, 14% moderate depression, and 12% severe depression. Chi-squared analyses revealed that women who had been recently physically assaulted at their 10-week interview had the highest prevalence of depression, as defined by the CES-D cut-off scores, $\chi^2(2, N = 132) = 14.63, p < .001$.

At the 6-month follow-up interview, 43% of the women had been recently battered, and of those women 29% reported no depression, 14% mild depression, 34% moderate depression, and 23% severe depression. Of the 57% of the women not assaulted, 51% experienced no depression, 23% mild depression, 14% moderate depression, and 23% severe depression. Again, chi-squared analyses indicated that women who had been recently abused had the highest prevalence of depression, $\chi^2(2, N = 129) = 13.05, p < .001$.

Hierarchical Regression Model Predicting Depression

Rationale for the model. A longitudinal model to predict battered women's depression 8½ months postshelter exit was evaluated. In this model, both predictive data (10 weeks postshelter exit data) and concurrent information (6-month follow-up data) were used to predict CES-D scores at 6 months, controlling for experimental condition (whether women received an advocate postshelter) and previous levels of depression. Previous literature has suggested that battered women's feelings of powerlessness, the levels of abuse they have been subjected to, and the social support available to them are linked to their depressive symptomatology. This model examined the longitudinal impact of these variables. Additionally, because the items on the CES-D anchor respondents to their recent feelings and experiences, a concurrent effect of these variables was also predicted.

Evaluation of the model. Hierarchial multiple regression was used to enter the variables in three blocks. The relevant statistical test is the significance of the change in the squared multiple R (R^2 change), which indicates that the new variable (or block of variables) adds significant predictive power, or variance, to the model beyond what the other vari-

Table 3

Rates of depression over time

Depression level	Shelter Exit	10 Weeks Later			6-Month Follow-up		
	Total (N = 139)	Abused (N = 60)	Not Abused (N = 72)	Total (N = 132)	Abused (N = 56)	Not Abused (N = 73)	Total (N = 129)
No depression	17	32	50	42	29	51	41
Mild	19	10	24	17	14	23	19
Moderate	28	38	14	25	34	14	22
Severe	36	20	12	16	23	12	17

Note: All values equal percentages.

ables already explain. Experimental condition was dummy coded and entered first into the equation, but had no impact on women's depression at 6 months postintervention ($F = .009$, $p = .93$; $R^2 = .00007$, $p = .93$). Second, the women's previous levels of depression (CES-D scores at 10 weeks), and the predictive influence of locus of control, abuse, and social support (scores at 10 weeks) were added, which were significant predictors ($F = 10.48$, $p < .0001$; $R^2 = .34$; R^2 change $= .34$, $p < .0001$). Finally, the women's concurrent (6-month follow-up) scores on locus of control, abuse, and social support were entered, and again there was a significant change in squared multiple R ($F = 9.28$, $p < .0001$; $R^2 = .44$; R^2 change $= .10$, $p < .001$). Table 4 summarizes this model and presents the beta weights and their significance for variables in these analyses. There is evidence for both the predictive and concurrent importance of women's feelings of powerlessness, abuse, and social support to understand depressive symptomatology 6 months postshelter exit.

DISCUSSION

Even 10 weeks after leaving a domestic violence shelter, almost half of the women in this sample no longer reported being depressed. This is a significant decrease, given that 83% of the women experienced depression immediately upon exit from the shelter. These results are consistent with previous research that has suggested battered women are depressed in a time of crisis, yet they stress the importance of examining long-term change and caution against overgeneralizations on battered women's psychological well-being. Over time, the depressive symptoms of many women receded.

For those women who were experiencing depression at the 6-month follow-up time period, a number of factors predicted their CES-D scores. In this research, we proposed an ecological, longitudinal model predicting depression, focusing on aspects of the abusive relationship and the women's social environments. There was support for the hypothesis that the stress of the abusive relationship was related to psychological distress as both the predictive effect and concurrent effect of feelings of powerlessness, abuse experienced, and social support were significant. Women who felt that they had little control over their lives were more depressed, which is consistent with other studies from different populations linking feelings of powerlessness with depression (see Mirowsky & Ross, 1989). As noted previously, given the culture of abusive relationships, it is not surprising women reported experiencing this form of stress. Physical abuse was only marginally significant in the predictor blocks, but it is important to remember that this variable had restricted range as many women were no longer physically abused by their assailants 10 weeks postshelter and at 6-month follow-up. Consistent with the social support literature, women

Table 4

Hierarchical multiple regression analysis and intercorrelations predicting depression at 6 months

Predictor Blocks	Depression Scores at 6 Months			
	r	*β*[a]	*t*	*Significance of t*
Block 1: Experimental Intervention				
$F = .009, p = .93$				
$R^2 = .00007$				
R^2 change $= .0007$, $p = .93$				
Experimental intervention	−.01	.008	−.09	.93
Block 2: Predictive Variables				
$F = 10.48, p < .0001$				
$R^2 = .34$				
R^2 change $= .34$, $p < .0001$				
Depression (10 weeks)	.50***	.29	3.10	.01
Locus of control (10 weeks)	.38***	.21	2.53	.01
Abuse (10 weeks)	.31***	.15	1.80	.07
Social support (10 weeks)	−.36***	−.19	−2.13	.05
Block 3: Concurrent Variables				
$F = 9.28, p < .0001$				
$R^2 = .44$				
R^2 change $= .10$, $p < .001$				
Locus of control (6 months)	.43***	.20	2.01	.05
Abuse (6 months)	.30***	.15	1.89	.06
Social support (6 months)	−.42***	−.20	−2.44	.05

[a] Standardized regression coefficients are reported for the step in which they were entered into the model.
*** $p < .001$.

who were happier with the quality of social support in their lives were less depressed. Further, feelings of powerlessness instilled by the violent relationship as well as the abuse itself have long-term effects on battered women's psychological well-being. In a more positive light, the help and support women received from their social networks had a preventive impact on depressive symptomatology. Some caution must be taken when

interpreting these results in that this sample of women was recruited from a domestic violence shelter. The same pattern of results may not emerge for battered women who do not utilize shelters. Replication of this model in a random sample of community women who are being abused by their partners is advisable.

This model of long-term depression can be used to guide intervention efforts to address battered women's needs over time. Whereas clinical programs aimed at improving women's psychological well-being are valuable, attention must also be paid to eradicating the violence in their lives. Community interventions promoting effective police and legal response are critical to ending abuse, as is access to other community resources, such as employment, education, and income. For women who must seek services from domestic violence shelters, their resources are already minimal. Moreover, both clinical and community interventions that work to empower women with abusive partners and strengthen their social support networks are needed. This research suggested that battered women who felt a loss of control over their lives were more depressed. Reestablishing feelings of control should be a primary focus of therapeutic interventions. This could be done, in part, by helping women make changes in their lives that can try to free them from the violence they are subjected to that severely hampers their feelings of control and personal empowerment. Moreover, these findings indicated that social support can have a positive, preventive impact on women's psychological well-being. Supportive, nonvictim-blaming assistance from family, friends, and community resources could be invaluable in improving battered women's well-being. Public education interventions that provide information about domestic violence and the dynamics of abusive relationships can address victim-blaming myths, working to create that supportive network for women. Improving battered women's long-term psychological well-being will require protecting women from abuse (including holding men accountable for their abusive behaviors), and bolstering women's support networks.

REFERENCES

Aneshensel, C. S., & Frerichs, R. P. (1982). Stress, support, and depression: A longitudinal causal model. *Journal of Community Psychology, 10,* 363–376.

Back, S. M., Post, R. D., & D'Arcy, G. (1982). A study of battered women in a psychiatric setting. *Women in Therapy, 1,* 13–26.

Bell, R. A., Leroy, J. B., & Stephenson, J. J. (1982). Evaluating the mediating effects of social support upon life events and depressive symptoms. *Journal of Community Psychology, 10,* 325–339.

Berk, R. A., Newton, P., & Berk, S. (1986). What a difference a day makes: An empirical

study of the impact of shelters for battered women. *Journal of Marriage and the Family, 48,* 481–490.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine, 4,* 139–157.

Bloom, B. L. (1992). Stressful life event theory and the prevention of psychopathology. In M. Kessler, S. E. Goldston, & J. M. Joffe (Eds.), *The present and future of prevention* (pp. 115–124). Newbury Park, CA: Sage.

Bogat, A. G., Chin, R., Sabbath, W., & Schwartz, C. (1983). *The Adult's Social Support Questionnaire* (Technical Report 2). East Lansing: Michigan State University.

Browne, A. (1987). *When battered women kill.* New York: Macmillan.

Bureau of Census, 1990. *Statistical Abstract of the United States 1990.* U.S. Department of Commerce, Bureau of Census.

Campbell, J. (1989). A test of two explanatory models of women's responses to battering. *Nursing Research, 38,* 18–24.

Carmen, E., Russo, N. F., & Miller, J. B. (1981). Inequality and women's mental health: An overview. *American Journal of Psychiatry, 138,* 1319–1330.

Cascardi, M., & O'Leary, K. D. (1992). Depressive symptomatology, self-esteem, and self-blame in battered women. *Journal of Family Violence, 7,* 249–259.

Cohen, S., & Hoberman, H. M. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology, 13,* 99–125.

Cohen, S., & Syme, S. L. (1985). Issues in the study and application of social support. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 3–22). Orlando, FL: Academic Press.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310–357.

Dobash, R. E., Dobash, R. P., & Cavanaugh, K. (1985). The contact between battered women and social and medical agencies. In J. Pahl (Ed.), *Private violence and public policy: The needs of battered women and the response of public services* (pp. 142–165). London: Routledge & Kegan Paul.

Finn, J. (1985). The stresses and coping behavior of battered women. *Social Casework: The Journal of Contemporary Social Work, 66,* 341–349.

Follingstad, D. R., Brennen, A. F., Hause, E. S., Polek, D. S., & Rutledge, L. L. (1991). Factors moderating physical and psychological symptoms of battered women. *Journal of Family Violence, 6,* 81–95.

Frieze, I. H., & Browne, A. (1989). Violence in marriage. In L. Ohlin & M. Tonry (Eds.), *Family violence* (pp. 163–218). Chicago: The University of Chicago Press.

Frieze, I. H., Hymer, S., & Greenberg, M. S. (1987). Describing the crime victim: Psychological reactions to victimization. *Professional Psychology: Research and Practice, 18,* 299–315.

Gellen, M. I., Hoffman, R. A. Jones, M., & Stone, M. (1984). Abused and nonabused women: MMPI profile differences. *Personnel and Guidance Journal, 62,* 601–604.

Gelles, R. J., & Harrop, J. W. (1989). Violence, battering, and psychological distress among women. *Journal of Interpersonal Violence, 4,* 400–420.

Gleason, W. J. (1993). Mental disorders in battered women: An empirical study. *Violence and Victims, 8,* 53–68.

Gondolf, E. (1988). *Battered women as survivors: An alternative to learned helplessness.* Lexington, MA: Lexington Books.

Gottlieb, B. H. (1981). Social networks and social support in community mental health. In B. H. Gottlieb (Ed.), *Social networks and social support* (pp. 11–42). Beverly Hills: Sage.

Greaves, L., Heapy, N., & Wylie, A. (1988). Advocacy services: Reassessing the profile and needs of battered women. *Canadian Journal of Community Mental Health, 7,* 39–51.

Hanson, R. K. (1990). The psychological impact of sexual assault on women and children: A review. *Annals of Sex Research, 3,* 187–232.

Hilberman, E., & Munson, K. (1977-1978). Sixty battered women. *Victimology: An International Journal, 2*, 460-470.

Hilbert, J., & Hilbert, H. (1984). Battered women leaving shelter: Which way do they go? *Journal of Applied Social Sciences, 8*, 292-297.

Homer, M., Leonard, A., & Taylor, P. (1985). Personal relationships: Help and hindrance. In N. Johnson (Ed.), *Marital violence* (pp. 93-108). London: Routledge & Kegan Paul.

House, J. S., & Kahn, R. L. (1985). Measures and concepts of social support. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 83-108). Orlando, FL: Academic Press.

Jaffe, P., Wolfe, D. A., Wilson, S., & Zak, L. (1986). Emotional and physical health problems of battered women. *Canadian Journal of Psychiatry, 31*, 625-629.

Kessler, R. C., & McLeod, J. D. (1985). Social support and mental health in community samples. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 219-240). Orlando, FL: Academic Press.

Koss, M. P. (1990). The women's mental health research agenda: Violence against women. *American Psychologist, 45*, 374-380.

Levenson, H. (1972). Distinctions within the concept of internal–external locus of control: Development of a new scale. *Proceedings of the 80th Annual Convention of the American Psychological Association* (pp. 261-262). Honolulu, Hawaii.

Menaghan, E. G. (1990). Social stress and the individual distress. In J. R. Greenley (Ed.), *Research in community and mental health* (pp. 107-141). Greenwich, CT: JAI Press.

Mirowsky, J., & Ross, C. E. (1989). *Social causes of psychological distress.* New York: Aldine de Gruyter.

Mitchell, R. E., & Hodson, C. A. (1983). Coping with domestic violence: Social support and psychological health among battered women. *American Journal of Community Psychology, 11*, 629-654.

Okun, L. (1986). *Woman abuse: Facts replacing myths.* Beverly Hills, CA: Sage.

Pagelow, M. (1981). *Woman battering: Victims and their experiences.* Beverly Hills, CA: Sage.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Resick, P. A. (1987). Psychological effects of victimization: Implications for the criminal justice system. *Crime and Delinquency, 33*, 468-478.

Resick, P. A. (1990). Victims of sexual assault. In A. J. Lurigio, W. G. Skogan, & R. C. Davis (Eds.), *Victims of crime: Problems, policies, and progress* (pp. 69-85). Newbury Park, CA: Sage.

Rhodes, N. R. (1992). Comparison of MMPI psychopathic deviate scores of battered and nonbattered women. *Journal of Family Violence, 7*, 297-307.

Roth, S., & Lebowitz, L. (1988). The experience of sexual trauma. *Journal of Traumatic Stress, 1*, 79-107.

Rounsaville, B. J. (1978). Theories in marital violence: Evidence from a study of battered women. *Victimology: An International Journal, 3*, 11-31.

Rounsaville, B., & Weissman, M. M. (1977-78). Battered women: A medical problem requiring detection. *International Journal of Psychiatry, 8*, 191-202.

Rumptz, M. H., Sullivan, C. M., Davidson, W. S. II, & Basta, J. (1991). An ecological approach to tracking battered women over time. *Violence and Victims, 6*, 237-244.

Sato, R. A., & Heiby, E. M. (1992). Correlates of depressive symptoms among battered women. *Journal of Family Violence, 7*, 229-245.

Schutte, N. S., Malouff, J. M., & Doyle, J. S. (1988). The relationship between characteristics of the victim, persuasive techniques of the batterer and returning to a battering relationship. *Journal of Social Psychology, 128*, 605-610.

Stacey, W. A., & Shupe, A. (1983). *The family secret.* Boston: Beacon Press.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and the Family, 38*, 75-88.

Straus, M. A. (1987). The costs of family violence. *Public Health Reports, 102,* 638–641.

Sullivan, C. M., Basta, J., Tan, C., & Davidson, W. S. II (1992). After the crisis: A needs assessment of women leaving a domestic violence shelter. *Violence and Victims, 7,* 271–280.

Sullivan, C. M., Campbell, R., Angelique, H., Eby, K. K., & Davidson, W. S. II (1994). An advocacy intervention program for women with abusive partners: Six-month follow-up. *American Journal of Community Psychology, 22,* 101–122.

Sullivan, C. M., Tan, C., Basta, J., Rumptz, M., & Davidson, W. S. II (1992). An advocacy intervention program for women with abusive partners: Initial evaluation. *American Journal of Community Psychology, 20,* 309–332.

Turner, R. J. (1983). Direct, indirect, and moderating effects of social support on psychological distress and associated conditions. In H. B. Kaplan (Ed.), *Psychological stress: Trends in theory and research* (pp. 105–155). New York: Academic Press.

Walker, L. E. (1979). *The battered woman.* New York: Harper & Row.

Walker, L. E. (1984). *The battered woman syndrome.* New York: Springer.

Wilcox, B. L. (1981). Social support, life stress, and psychological adjustment: A test of the buffering hypothesis. *American Journal of Community Psychology, 9,* 371–386.

Williams, A. W., Ware, J. E., & Donald, C. A. (1981). A model of mental health, life events, and social supports applicable to general populations. *Journal of Health and Social Behavior, 22,* 324–336.