American Journal of Community Psychology, Vol. 30, No. 1, February 2002 (© 2002)

The Process Through Which an Advocacy Intervention Resulted in Positive Change for Battered Women Over Time[1]

Deborah I. Bybee and Cris M. Sullivan[2]

Michigan State University

A prior experimental evaluation of a community-based advocacy program for women with abusive partners demonstrated positive change in the lives of women even 2 years postintervention (C. M. Sullivan & D. I. Bybee, 1999). The current study explored the complex mediational process through which this change occurred, using longitudinal structural equation modeling and formal tests of mediation. As hypothesized, the advocacy intervention first resulted in women successfully obtaining desired community resources and increasing their social support, which enhanced their overall quality of life. This improvement in well-being appeared to serve as a protective factor from subsequent abuse, as women who received the intervention were significantly less likely to be abused at 2-year follow-up compared with women in the control condition. Increased quality of life completely mediated the impact of the advocacy intervention on later reabuse. Discussion places advocacy for women in the context of other efforts that are needed to build an effective community response to preventing intimate violence against women.

KEY WORDS: domestic violence; battered women; longitudinal structural equation modeling; tests of mediation.

[1]This research was supported by National Institute of Mental Health Grant R01 MH44849 and grant 98-WT-VX-0013, from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Points of view in this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice or NIMH. The authors acknowledge the dedication of all staff members of the Community Advocacy Project, as well as input from all participants, without whom this research would not have been possible. Thanks also to two anonymous reviewers, who provided helpful guidance on the statistical approach to modeling mediation.

[2]To whom correspondence should be addressed at Department of Psychology, Michigan State University, East Lansing, Michigan 48824-1117; e-mail: sulliv22@msu.edu.

0091-0562/02/0200-0103/0

Domestic violence, or intimate male violence against women, has been recognized as a serious and pervasive social problem, with over 1.5 million women being assaulted by intimate partners or ex-partners each year (Miller & Wellford, 1997; Straus & Gelles, 1986). One component of domestic violence includes batterers isolating women from their friends and family, an effective strategy in maintaining power and control over them (Dobash, Dobash, & Cavanaugh, 1985; Ptacek, 1997). Many women have been threatened with worse violence, or even death, by their assailants should they make any attempts to leave them (Browne, 1987; Schutte, Malouff, & Doyle, 1988). Some women also love the positive sides of the men who abuse them and want their relationships to work (Baker, 1997; Peled, Eisikovits, Enosh, & Winstok, 2000). Whether seeking help to end the violence while maintaining the relationship, or seeking help to end the relationship as well as the violence, women turn to a variety of community systems to protect themselves and their children, including domestic violence shelter programs, the police, health care professionals, religious leaders, and the social service system (Caralis & Musialowski, 1997; Gondolf, 1988; Sullivan, 1991, 1997; Wauchope, 1988). Unfortunately, women are often unsuccessful in obtaining the help needed from the very agencies and institutions designed to provide it (Binney, Harkell, & Nixon, 1981; Dobash et al., 1985; Epstein, 1999; Stark & Flitcraft, 1996; Sullivan, 1997).

To redress the often inadequate or ineffective responses battered women receive from their communities, the majority of domestic violence service programs engage in various forms of advocacy on women's behalf (Peled & Edleson, 1994). These advocacy efforts generally involve paraprofessionals, working collaboratively and respectfully with individual survivors who guide the focus of the intervention to meet their specific needs and desires. Such community-based advocacy interventions have received scant evaluation, and the belief in their effectiveness has largely been predicated on anecdotal evidence.

In response to this dearth of information about the effectiveness of advocacy for women with abusive partners, the authors designed and experimentally evaluated a community-based advocacy intervention for women after they exited a domestic violence shelter program (Sullivan & Bybee, 1999; Sullivan, Campbell, Angelique, Eby, & Davidson, 1994; Sullivan, Tan, Basta, Rumptz, & Davidson, 1994). In keeping with the overall philosophy of strengths-based services, the intervention was designed to flexibly meet the unique needs of each individual involved in the program. The trained paraprofessionals also worked with the women in their natural settings to maximize the likelihood of creating lasting change (Dunst, Trivette, & Thompson, 1994; Fraser & Galinsky, 1997; Saleebey, 1997). Previous publications have described the advocacy intervention process and activities (Sullivan, 2000)

and have reported outcome results of the randomized field trial (Sullivan & Bybee, 1999), which showed significant positive intervention effects persisting across 2-year follow-up on women's social support, difficulty accessing resources, quality of life, and experience of physical violence by a partner or ex-partner. Although this initial analysis confirmed more positive outcomes for women who received the advocacy intervention, it did not examine the complex process through which results were achieved over time. The analysis reported here examines the mediational processes that were hypothesized to account for the intervention impact.

The advocacy intervention was intended to enhance the quality of women's lives by improving their access to community resources and increasing the social support available to them. In other words, increases in social support and resources were expected to mediate or explain the impact of the intervention on quality of life. Over time, improved quality of life was expected to exert a protective effect against further abuse by an intimate partner or ex-partner.

Social support and access to community resources are both well-supported in prior literature as potential mediators of intervention effects on quality of life. Social support has been shown to have beneficial effects on well-being across a variety of populations (e.g., Collins, Dunkel-Schetter, Lobel, & Scrimshaw, 1993; Hobfoll & Lilly, 1993; Sarason, Sarason, & Pierce, 1990). Prior research has suggested that social support helps to mitigate the damaging effects of domestic violence (Bowker, 1984; Kemp, Green, Hovanitz, & Rawlings, 1995; Mitchell & Hodson, 1983) and may protect women from further abuse (Tan, Basta, Sullivan, & Davidson, 1995). For women with abusive partners, supportive people have been hypothesized to provide access to opportunities, support, and information that can protect women from batterers' violence and threats.

Social support has been conceptualized both as enacted support (i.e., support that an individual has actually received) and perceived support—support that an individual believes is available and would be forthcoming if needed (Barrera, 1986). Researchers have typically found perceived support, compared with actual mobilization of support, to relate more strongly and consistently to overall quality of life (Kaniasty & Norris, 1992). The perception that support is available has been shown to be an important outcome of support actually received by victims of natural disasters as well as a significant negative predictor of distress, both cross-sectionally and longitudinally (Norris & Kaniasty, 1996).

As with social support, access to community resources has commonly been associated with higher quality of life, especially when the resources are relevant to an individual's personal goals and strivings (Diener & Fujita, 1995). Access to community resources can specifically serve to protect women

from abusive partners. Whether those resources include police protection, restraining orders, safe housing, employment, transportation, etc., adequate access to community commodities and opportunities have been hypothesized to shield women from violence by intimate partners and ex-partners.

On the basis of these literatures, the intervention was expected to effect improvement in women's quality of life as a result of increasing social supports and resources relevant to women's goals and priorities. Although there is no single definition of quality of life (or subjective well-being), the construct has been operationalized as a general sense of contentment with one's experience of the world (Diener, Suh, Lucas, & Smith, 1999; Stark & Goldsbury, 1990; Taylor & Bogden, 1990). Conceptualized as encompassing more than "life satisfaction," overall quality of life is related to one's social relationships, financial independence, overall psychological well-being, self-determination and autonomy, personal development and fulfillment, and physical and material well-being (Dennis, Williams, Giangreco, & Cloninger, 1993; Hughes, Hwang, Kim, Eisenman, & Killian, 1995; Schalock, 1997). Most importantly, quality of life is related to the congruence between available resources and an individual's own goals and priorities (Diener & Fujita, 1995).

In most research to date, quality of life has been conceptualized as an outcome variable rather than a mediator or predictor of outcome. However, Diener (1984) and Diener and Fujita (1995) speculated that not only do resources influence one's immediate well-being, but well-being or quality of life can influence a person's latter resources. Incorporating this notion into the current model, enhanced quality of life was expected to facilitate later acquisition of resources and supports and to exert a preventive influence on further victimization by a partner or ex-partner. The mechanisms by which quality of life may influence the experience of a stressor such as reabuse have been largely unexamined, although there has been some related theorization. Diener and colleagues have speculated that subjective well-being can influence a person's goals and strivings, as individuals accommodate their aspirations to available levels and types of resources (Diener & Fujita, 1995; Diener et al., 1999). From a related but somewhat different perspective, Fredrickson (2001) contended that experience of the positive emotions subsumed under "subjective well-being" serves to broaden individuals' thought–action repertoires, allowing them to build lasting personal resources (e.g., psychological, social, intellectual, and physical strengths) that can be called upon in future times of stress or opportunity. Both suggest that improvement in quality of life can influence a woman's perception of what is possible for her to have or achieve and also expand her personal resources for protection from reabuse by a partner or ex-partner.

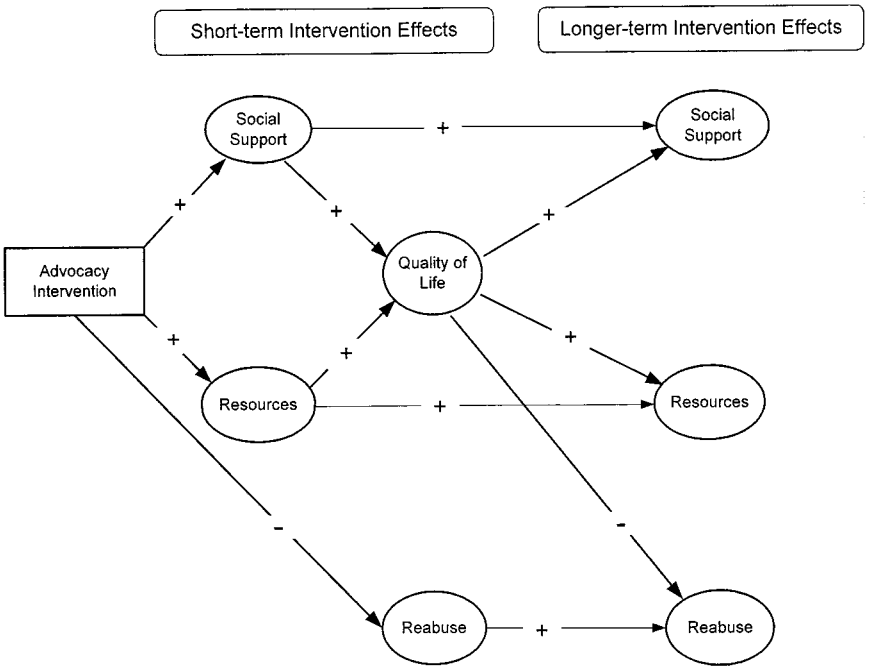

Fig. 1. Conceptual model. This model presents a simplification of the longitudinal model actually tested. It displays only the central elements of the hypothesized mediated relationships.

Figure 1 summarizes the main elements of the conceptual model of the intervention process. Hypothesized effects are separated into short-term (immediate, observable at the postintervention measurement point), and longer-term effects (observed at later follow-up measurement points, through 2-year postintervention). In the short-term, the advocacy intervention was intended to have direct, positive effects on social support and access to resources. Improvement in social support and resources was then expected to have a positive effect on quality of life.

It was also hypothesized that advocacy would show a short-term direct effect on reabuse during the intervention. Although not central to the program theory, it was anticipated that the presence of the advocate during the intervention period could serve to deter an assailant from further abuse in the short-term. It was not clear whether the direct protective benefit of the advocate's efforts would persist beyond the immediate postintervention point, but the model reflects this possibility in the stability path between short- and longer-term reabuse.

Over time, the effects of both social support and resources were expected to persist, at least in part. In addition, improved quality of life was expected to have a positive impact on longer-term social support and resources, mediating the intervention's effects on longer-term outcomes in these domains. Improved quality of life was also expected to have a negative (protective) long-term impact on reabuse, mediating the effect of advocacy on future reabuse.

Longitudinal latent structural equation modeling (SEM) was used to test the fit of the data to a longitudinal extension of the conceptual model in Fig. 1. This approach offers several advantages for tests of mediation. First, the analysis is dynamic, incorporating time intervals that are logically necessary for the hypothesized causal and intervening forces to exert their effects (Gollob & Reichardt, 1991). Second, it allows controls for prior levels of both mediators and outcome variables, reducing the impact of variables not included in the model (i.e., spurious factors) and increasing power. Third, by organizing observed indicators into latent constructs, the approach reduces the impact of measurement error and provides a way to model correlation of measurement errors across time. Fourth, it offers statistical tests of overall model fit as well as formal comparisons between alternative models. Fifth, the method provides a way to model, quantify, and test the significance of mediated effects that operate through complex chains of intervening variables. Although the mediation tests are themselves correlational, applying them in the context of a successfully randomized experiment strengthens the conclusions that can be drawn. Random assignment to treatment condition supports causal interpretation about the direct effects of the intervention on the mediator and outcome variables, although it does not rule out specification errors such as possible mutual influence between mediator and outcome or the possibility that there may be other mediators, omitted from the current model, that influence both the outcomes and identified mediators (West & Aiken, 1997).

METHOD

Research Participants

Recruitment

Participants were recruited from a Midwest shelter program for women with abusive partners. Women were eligible for the project if they (1) spent at least one night in the shelter, and (2) planned to stay in the general vicinity for the first 3 months postshelter. Potential participants were informed

that all respondents would be interviewed six times over a 2-year period—immediately upon shelter exit, 10 weeks later, and at 6, 12, 18, and 24-month follow-up. Women were also told that half the women being interviewed would be randomly selected to receive free advocacy services for the first 10 weeks postshelter exit, 4–6 hr/week. Ninety-three percent of eligible women agreed to participate. Two hundred eighty-four women completed initial interviews. To be considered a research participant, women had to be involved in the study a minimum of 3 weeks. This time frame was chosen to give women working with advocates ample time to get acquainted and begin working. Of the 284 initial study participants, five women from the advocacy condition ended their participation within the first 2 weeks, and one woman was murdered by an intimate partner 1 week into the intervention.[3] Data presented are based on the 278 remaining participants.

Condition Assignment

All research participants were interviewed within the first week after exiting the shelter program. Most interviews were conducted in women's homes, and all were conducted in private rooms with no other adults present. Immediately upon completion of the first interview, respondents opened a sealed envelope that informed them if they would or would not be working with an advocate. Interviewers did not know to which group women would be assigned. Group selection was random, stratifying for order and for whether or not a woman was involved in an ongoing, intimate relationship with her assailant.[4] One hundred forty three women were assigned to the experimental condition. Women selected into this condition began working with trained advocates within a week. Women in the control group were not contacted again until their next interview.

Demographics

The advocacy and control conditions did not differ significantly on any demographic variables. Forty-five percent of the participants were African American, and 42% were European American. Seven percent were Latina, 2% were Asian American, and the remainder were Native American, Arab American, or of mixed heritage. Ages ranged from 17 to 61 years, with a

[3]The small number of participants who dropped out of the intervention did not allow the use of treatment noncompliance or attrition correction techniques.

[4]As involvement with assailant had the potential for influencing whether a woman would be abused over time, it was important to ensure that equal numbers of women in this situation be included in each condition.

mean of 29 years. Seventy-four percent had at least one child living with them.

Two thirds of the sample had completed high school or had obtained GED's, and 35% had completed at least some college. Most were unemployed before entering the shelter (59%), and 76% were receiving some form of governmental assistance. All spoke English as their first language.

The mean length of stay at the shelter had been 19 days (range = 1–76, $SD = 16.5$). Twenty-seven percent of the women were married to the men who had abused them, and an additional 42% had been living with but not married to their assailants at the time of the abuse. Seven percent of the women had been intimately involved with the men who had abused them but were not living together, and 20% were no longer involved with their partners at the time of the last assault (either separated, divorced, or no longer dating).

Violence experienced by the women in the six months prior to entering the shelter had been quite severe. Injuries included cuts and bruises (85%), broken bones (19%), dislocations (10%), and miscarriages or pregnancy complications due to the abuse (11%).

The Advocacy Intervention

Philosophies Guiding the Intervention

Two complementary philosophies guided the intervention. First, the program was predicated on the idea that trained and supervised paraprofessionals are at least as effective if not more effective than their professional counterparts in providing certain types of advocacy services (Davidson, Redner, Blakely, Mitchell, & Emshoff, 1987). The second guiding principle of the intervention emerged from the theory of strengths-based services. Strengths-based interventions have gained popularity in the last 10 years as a promising approach for individuals and families facing a variety of difficulties (see Early & GlenMaye, 2000; Rapp, 1998; Saleebey, 1997). First articulated in the field of social work in the early 1960s (Saleebey, 1997), such interventions also embody many of the tenets of community psychology (Iscoe, 1974; Kelly, 1988; Trickett, 1984). Unlike the traditional expert-based, deficit-focused model of intervening with individuals, the strengths perspective focuses on the following assumptions: (1) individuals have talents, knowledge, and competencies that help them through difficult circumstances; and (2) people are resilient, with the capacity to thrive in spite of adversity (Early & GlenMaye, 2000). This philosophy, then, guided the advocacy intervention, which correspondingly embodied the following components:

(1) enhancing an individual's inherent competencies, talents, and strengths; and (2) mobilizing the community to effectively respond to the individual's needs for resources, services and opportunities.

Training and Supervision of Paraprofessional Advocates

One hundred forty three advocates participated in the project over a 6-year time period. Advocates were female undergraduate students enrolled in a two-semester Community Psychology course. The first semester involved extensive training, consisting of information about woman abuse, empathy and active listening skills, theoretical underpinnings of strengths-based interventions, strategies for formally assessing women's needs and strengths, practice in generating, mobilizing, and accessing community resources, and in-depth discussion of dealing with potentially dangerous situations. After training, each advocate was required to work 4–6 hr/week with and on behalf of a single client for a period of 10 weeks. Advocates received intensive supervision and monitoring in weekly sessions comprised of 5–7 students and two supervisors. Supervisors were also available 24 hr a day for questions or advice. Supervision focused on ensuring that each intervention adhered to program philosophy and design.

The Intervention Process

The strengths-based framework guiding this intervention necessitated that paraprofessionals adhere to the following guidelines: (1) focusing not on deficits within the family, but rather on the woman's strengths; (2) working on issues the woman identified as being important to her; (3) focusing on making the community more responsive to the woman's needs; and (4) maximizing the likelihood of long-term change occurring for the family by working within the woman's natural setting and transferring skills and knowledge to her before termination of the intervention (Fairweather & Tornatzky, 1977; Powell, Batsche, Ferro, Fox, & Dunlap, 1997).

Specific Intervention Activities

Each intervention was individualized to meet the specific needs of the women participating in the program. However, advocates had specific guidelines within which they worked, and advocacy consisted of five distinct phases: assessment, implementation, monitoring, secondary implementation, and termination (Davidson & Rappaport, 1978; Sullivan, 1991). Each intervention included formally assessing women's needs and strengths with

them, obtaining and sharing information about community resources with women as needed, and actively joining women in working to obtain what they needed from their communities. Advocates accompanied women as they kept appointments with governmental or community-based agencies, they filled out employment applications with them, investigated day care centers together, and/or accompanied women through the court process. The paraprofessionals shared what they had learned in training with the women so that, by the end of the ten week intervention, their advocacy services would no longer be needed. Each intervention worked toward a formal termination date, when contact between the woman and the student advocate ended. For more information about the distinct phases of the advocacy intervention, see Sullivan & Bybee, 1999.

Fidelity of the intervention was assessed through a variety of strategies. Each week supervisors advised advocates about working within the philosophy of the program and maintained weekly notes about each intervention's progress. Advocates also documented their intervention activities and goals on a weekly basis. Finally, postintervention interviews about the activities of the intervention were conducted with both advocates and the women.

Women reported seeing their advocates about twice a week over the ten-week intervention ($M = 2.3$; $SD = 1.18$) and spending on average 6.4 hr a week with them ($SD = 4.68$). The types of community resources women and their advocates attempted to access included education (84%), legal assistance (72%), employment (72%), services for their children (68% of the mothers), housing (67%), child care (63% of the mothers), transportation (62%), financial assistance (61%), health care (60%), and social support (47%). Ninety eight percent reported being either satisfied or very satisfied with the project. More detailed information about the intervention process and activities can be found in Sullivan and Bybee (1999).

Interviews

Extensively trained interviewers conducted face-to-face interviews in women's homes or in locations convenient for participants. Interviews lasted approximately 1.5 hr and were audiotaped to maximize coding accuracy. All interviews were then checked by supervisors, and all data were verified after being entered into the computer.

Measures

For use in latent structural equation modeling, multiple indicators were developed for the constructs in the conceptual model at each of three time

points—postintervention, 12-month follow-up, and 24-month follow-up. Previous analysis indicated that these annual observations captured most of the observed change on the major outcome variables, with intervening measurement points documenting relative stability and adding little new information. Descriptive statistics for each observed indicator are shown in Table I.[5] Estimates of the internal consistency of each indicator, where applicable, are provided in Table II.

Social Support

Nine items measured the quantity and quality of women's perceived social support across domains (Bogat, Chin, Sabbath, & Schwartz, 1983). Women indicated on a 7-point scale (1 = *terrible* to 7 = *extremely pleased*) how they felt about various types of social support. Similar to the measure used by Norris and Kaniasty (1996), this measure addressed support across several functions including emotional support, advice, practical assistance, and companionship. Three indicators were constructed from these items: Amount of Support (4 items), Quality of Support (4 items), and Overall Satisfaction with Support (single item).

Resources

At postintervention, women rated their Effectiveness in Obtaining Resources across eleven areas: housing, material goods and services, education, employment, health care, child care, transportation, social support, legal assistance, financial issues, and issues regarding their children. Response categories ranged from 1 = *very ineffective* to 4 = *very effective*, and scale scores were created by calculating the mean of self-report effectiveness across the domains in which a woman had tried to obtain resources during the previous 10 weeks. On average, 6.7 domains were rated by each woman. To allow estimation of internal consistency for this individualized measure, data points that were missing due to inapplicability were imputed through expectation maximization (EM; Little & Rubin, 1990), a technique that uses all available data to estimate the moment matrix, preserving observed relationships among items and cases. The estimate of Cronbach's alpha was .86. For the SEM, the mean rating across domains applicable to each woman's experience was used as a single indicator of effectiveness. The measurement coefficient was set to one, and the error variance was fixed at [(1-internal consistency) × observed scale variance], following Hayduk (1996).

[5] A correlation matrix with standard deviations can be obtained from the first author by request.

Table I. Descriptive Statistics on Observed Indicators Over Time, by Condition

Observed indicators for each latent construct	Means (standard deviations) $N = 267^a$					
	Postintervention		12-month follow-up		24-month follow-up	
	X	C	X	C	X	C
Social support						
Amount of support	5.44 (0.98)	4.77 (1.20)	5.31 (1.16)	5.19 (1.15)	5.44 (1.06)	5.34 (1.14)
Quality of support	5.52 (0.92)	4.88 (1.19)	5.36 (1.12)	5.17 (1.14)	5.47 (1.01)	5.33 (1.12)
Overall satisfaction	5.34 (1.44)	4.70 (1.51)	5.26 (1.43)	5.09 (1.32)	5.45 (1.29)	5.10 (1.42)
Resources						
Effectiveness	3.25 (0.56)	2.69 (0.71)	—	—	—	—
Difficulty	—	—	2.24 (0.61)	2.24 (0.58)	2.01 (0.63)	2.18 (0.66)
Satisfaction	—	—	2.51 (0.71)	2.56 (0.63)	2.72 (0.69)	2.58 (0.71)
Quality of life						
Item parcel 1	4.91 (1.16)	4.49 (1.27)	5.04 (1.14)	4.76 (1.15)	5.18 (1.24)	4.81 (1.26)
Item parcel 2	5.15 (0.99)	4.73 (1.18)	5.11 (1.08)	4.88 (1.13)	5.18 (1.12)	4.99 (1.17)
Item parcel 3	5.01 (1.23)	4.62 (1.22)	5.11 (1.22)	4.92 (1.15)	5.23 (1.17)	5.03 (1.24)
Reabuse						
Conflict tactics	1.21 (0.47)	1.25 (0.37)	1.22 (0.42)	1.29 (0.50)	1.18 (0.50)	1.18 (0.31)
Frequency/severity	0.80 (1.08)	1.08 (1.13)	0.88 (1.07)	0.98 (1.14)	0.61 (0.99)	0.86 (1.07)
No. of times harmed	1.71 (1.18)	1.87 (1.09)	1.80 (1.17)	1.99 (1.32)	1.55 (1.06)	1.76 (1.04)

[a]X (experimental/advocacy) $n = 135$; C (control) $n = 132$.

Table II. Longitudinal Measurement Model

Observed indicators for each latent construct	Indicator reliability (Cronbach's Alpha)			Standardized measurement coefficients		
	Postintervention	12-month follow-up	24-month follow-up	Postintervention	12-month follow-up	24-month follow-up
Social support						
Amount of support	.77	.84	.85	.97	.95	.98
Quality of support[a]	.78	.86	.86	.94	.97	.94
Overall satisfaction	—	—	—	.78	.86	.79
Resources						
Effectiveness[b]	.68	—	—	.83	—	—
Difficulty	—	.76	.74	—	−.63	−.67
Satisfaction[a]	—	.78	.82	—	.68	.77
Quality of life						
Item parcel 1	.77	.77	.77	.88	.89	.91
Item parcel 2[a]	.74	.69	.78	.90	.83	.88
Item parcel 3	.76	.68	.74	.82	.82	.89
Reabuse						
Conflict tactics	.86	.90	.90	.95	.95	.95
Frequency/severity	—	—	—	.97	.98	.97
No. of times harmed[a]	—	—	—	.90	.83	.84

[a] Coefficients for these indicators were set to 1 to scale the latent variables in the unstandardized solution.
[b] In the unstandardized model, the coefficient for this single indicator was set to 1 and the error variance was fixed at [(1-internal consistency) × observed scale variance] or .157, following Hayduk (1996).

At 12- and 24-month follow-up, two variables measured access to resources. Difficulty Obtaining Resources was composed of eleven items that assessed women's perceptions of the difficulty they had experienced in obtaining resources in different areas (e.g., employment, housing) or, if they had not tried to access resources in a specific area, the difficulty they would expect to encounter. Response categories ranged from 1 = *not a problem* to 4 = *very much a problem*. Satisfaction with Resources was a five-item scale assessing satisfaction with living arrangement, educational level, transportation, financial situation, and material goods; higher scores on the 4-point response scale indicated greater satisfaction.

Quality of Life

Using nine items adapted from Andrews and Withey (1976), women indicated how they felt about how their lives were going. Sample items included: "How do you feel about what you are accomplishing in your life?" and "How do you feel about your emotional and psychological well-being?" (1 = *terrible* to 7 = *extremely pleased*; total scale $\alpha = .88$). Because the scale was unidimensional, with no discernible subscale structure, items were systematically distributed into three-item parcels to create three indicators of this construct at each time point (see Kishton & Widaman, 1994).

Reabuse

Each interview assessed the violence women had experienced by partners and ex-partners. During the postintervention interview, women were asked about violence during the prior 10 weeks; at both follow-up interviews, they were asked about the previous 6 months. Using an enhanced version of the Conflict Tactics Scale (Straus, 1979), women reported how often [1 = *never* to 6 = *more than 4 times a week*] they had experienced each of the types of violence listed (e.g., punched, kicked). All women were asked these questions about their original assailants (whether or not they were still involved with them) and about new partners. Two indicators were derived from this measure. First was the Conflict Tactics Scale score, an average score across all 12 items. Second, following the rationale of Downs, Miller, and Panek (1993), responses were combined to create a Frequency/Severity Scale of Violence, with 0 = *no violence*, 1 = *less severe abuse only* (tore clothing, pushed, grabbed, shoved, slapped, threw something at), 2 = *lower frequency* [once a month or less] severe abuse (kicked, hit with fist, hit or tried to hit with object, beat up, choked, tied up, raped, threatened, and/or

used a gun or knife), and 3 = *high frequency severe abuse*. Responses to a separate question, the number of times women reported having been physically harmed in any way by a partner or ex-partner [1 = *never* to 6 = *more than 4 times a week*], constituted the third indicator of this construct.

Retention Rate Over Two Years

An extensive protocol was created and implemented to maximize retention of this mobile population over 2 years. Strategies included making multiple contacts in the community, obtaining written Release of Information forms from participants, and paying women for participating in the research interviews. This protocol resulted in a retention rate of 95% at the postinterview, 94% at 6- and 12-months, and 95% at 18- and 24-months. Retention rates were not significantly different between the advocacy and control conditions at any time point ($\chi^2_{(1, N=278)} = 0.19$ to 0.86, *ns*). The specific components of the retention plan can be found in Sullivan, Rumptz, Campbell, Eby, and Davidson, 1996.

Analysis Plan

Structural equation modeling followed Anderson and Gerbing's two-step approach (Anderson & Gerbing, 1988), in which the fit of the measurement model, with all constructs allowed to freely covary, provides a baseline for testing the fit of the hypothesized structural model. As recommended by Hu and Bentler (1995) for a variety of data types, maximum likelihood (ML) methods were used to estimate model parameters. With two exceptions, observed univariate distributions were sufficiently normal for the assumptions of ML estimation; transformations successfully reduced moderate skew and kurtosis for two indicators of reabuse (a log transformation for number of times harmed and the reciprocal transformation for the Conflict Tactics Scale).[6] After applying these transformations, no endogenous indicators showed univariate kurtosis greater than 1.

Of the original sample of 278 women who participated in the research, 11 were excluded because they were missing more than one follow-up interview. The proportion excluded did not differ significantly between groups.

[6]Because the response scales used for these variables were arbitrary, transformation incurred little change in meaning. Transformation affected primarily the upper tails of the distributions of these variables, limiting the influence of very high scores. Correlations between original and transformed variables ranged from .93 to .97, indicating minimal change to the original distributions.

Seventeen of the remaining 267 cases had smaller amounts of missing data (totaling less than 1.5% of the data matrix); full information maximum likelihood (FIML) estimation, implemented in Amos 4 (Wothke, 1998) allowed these cases to be included in the SEM analyses. For calculation of fit indices and other procedures requiring a complete data matrix, expectation maximization (EM) methods were used to estimate missing values (Little & Rubin, 1990).

Model fit was assessed through indices and thresholds suggested by Hu and Bentler (1998, 1999): standardized root-mean-residual (SRMR; Bentler, 1995) of .08 or smaller, root-mean-square error of approximation (RMSEA) of .06 or smaller, and incremental fit index (IFI or BL89, Bollen, 1989) of .95 or greater. Model chi-square was also reported, and the likelihood ratio (LR) chi square was used to compare the fit of nested models.

After establishing adequate fit to the data, the structural model was used to test and interpret specific mediation effects of the intervention on outcomes over time, using procedures outlined by Baron and Kenny (1986), Brown (1997), Holmbeck (1997), MacKinnon (2000), MacKinnon & Dwyer (1993), and West and Aiken (1997). Current recommendations judge the sample of 267 adequate for tests of mediation effects. According to MacKinnon, Warsi, and Dwyer (1995), a sample of this size should be adequate for stable and unbiased estimation of indirect effects and standard errors. Power to determine the significance of a mediated effect should also be adequate, exceeding .90 in most instances, given the sample size, measure reliability, degree of collinearity between independent and mediating variables, and the use of latent modeling (see Hoyle and Kenny, 1999). It should be noted that the mediation effects examined here are more complex than those described in previous simulation studies, so the applicability of their recommendations is uncertain.

RESULTS

Measurement Model

Confirmatory factor analysis showed that the measurement model (i.e., the relationships between observed indicators and latent constructs) was an adequate fit to the data. Standardized measurement coefficients linking the observed indicators to each latent construct are listed in Table II. Most coefficients were above .80, indicating high saturation with their respective constructs. Saturation was lower for indicators of resources, but even these exceeded .60. In all models, errors of measurement for indicators assessed repeatedly over time were allowed to covary across time. Fit

of the unconstrained measurement model was very good: $\chi^2_{(390)} = 542.786$, $p < .001$, SRMR = .032, RMSEA = .038, IFI (BL89) = .980.

To ensure that measurement of the constructs was invariant over time, the unconstrained measurement model was compared with a model in which measurement coefficients were required to be equal across the three measurement points. Imposing measurement constraints produced no decrement in model fit ($LR\chi^2_{(13)} = 15.007$, $p = .307$), supporting the contention that the factorial structures of the measures were invariant over time. The unconstrained measurement model was used as the basis for structural modeling.

Structural Model

The result of imposing directional links between latent constructs can be seen in Fig. 2. The first panel of the longitudinal model shows the hypothesized immediate effects of the intervention; the later effects of intervention on outcomes at 12-month follow-up are in the second panel; and the continuing effects on 24-month follow-up are in the third panel.

Structural links were specified according to program theory and theoretical considerations about the timing of various effects, as suggested by Finkel (1995). Access to community resources and increased social support were the anticipated immediate outcomes of the intervention, and they were modeled as having direct effects at the postintervention point. Resources and support frequently overlap, and in the model they were allowed to covary within each time point. To the extent that the increased resources and support met women's needs in these areas, they were expected to result in improved quality of life. Thus, the impact of the advocacy intervention on quality of life was expected to be mediated by both social support and quality of life. Over time, improved quality of life was expected to facilitate further access to community resources and social support.

The intervention was expected to reduce further abuse in two ways. First, it was anticipated that the presence of the advocate in the woman's home for 4–6 hr/week and the efforts they engaged in together would have an immediate protective benefit, deterring a woman's assailant from further abuse during the intervention. This was modeled as a direct effect of the intervention. It was unknown whether this protective effect would persist beyond termination of the intervention, but this possibility was built into the model. More lasting impact on reabuse was anticipated through intervention effects on the acquisition of meaningful resources and social support capable of improving the quality of a woman's life. Improvement in life quality and reduction in abuse were expected to covary within time, such that a reduction in abuse would be associated with an improvement in quality of life and vice

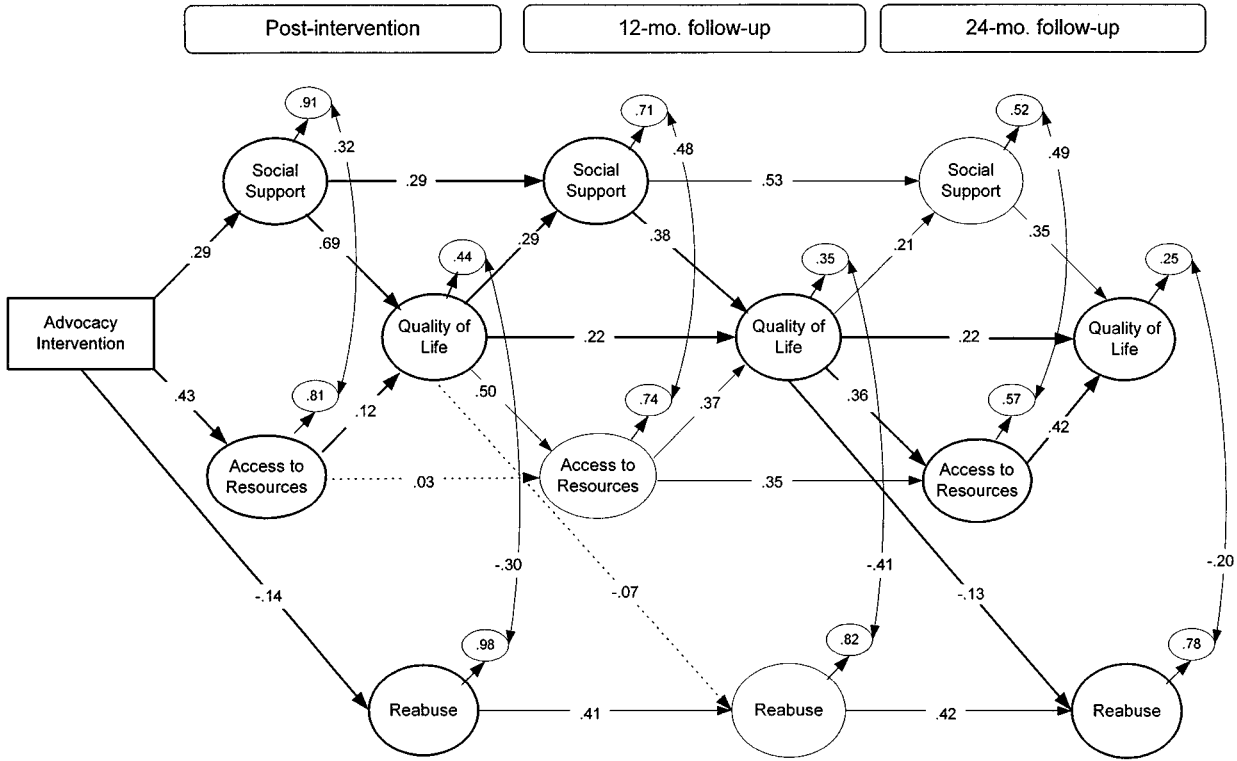

Fig. 2. Structural model fit to the data. Standardized parameters are shown. Large ellipses are latent constructs; numbers inside small ellipses are standardized error variances. Straight lines with single arrows show directed, structural coefficients; curved lines with double errors indicate within-time covariances between disturbances. Coefficients for paths drawn as solid lines are significantly different from zero at directional $p < .05$. Nonsignificant paths are shown as dotted lines. Constructs in bold are those that showed a significant unpartialled direct effect of the intervention and therefore could act as mediators of intervention effects; Lines in bold show potential mediating paths. Unbold constructs and paths represent indirect rather than mediated effects.

versa. This association was modeled as a covariance within each time point. However, improvement in quality of life as the result of increased social support and access to resources was also expected to have a more distal preventive effect on later reabuse. Thus, the mediational effects of quality of life on later reabuse were modeled across the 1-year intervals between measurement points.

The structural model was a good fit to the data: $\chi^2_{(439)} = 635.312$, $p < .001$, SRMR = .064, RMSEA = .041, IFI (BL89) = .976. Although there was significant reduction in fit relative to the measurement model ($LR\chi^2_{(49)} = 92.526$, $p < .001$), the more parsimonious structural model was a good representation of the covariance matrix. In addition to showing global fit to the data, the hypothesized model in Fig. 2 showed good local fit, in terms of expected zero and nonzero path coefficients. All structural coefficients in the hypothesized model were in the expected direction, and all but two were statistically significant at $p < .05$.

Tests of Mediation

Formal tests of mediation adapted the strategy outlined in West and Aiken (1997), which combines the multistep approach advocated in Baron and Kenny (1986) and Judd and Kenny (1981) with tests of the significance of mediated effects, as described by MacKinnon and Dwyer (1993) and MacKinnon (2000). The first step assessed whether the intervention had a significant direct impact on all putative mediator and outcome constructs in the model. For each construct in turn, this test was accomplished by fixing to zero all indirect paths leading to the construct and estimating only the direct path from the intervention (Brown, 1997). Resulting direct standardized effects are presented in the first panel of Table III. The second step involved the demonstration of mediation, or the reduction in magnitude of each direct intervention effect when controlling for the effects of intervening constructs specified in the model. For each construct in turn, a direct path from the intervention was added to the indirect effects specified in the model in Fig. 2. Failure of this direct intervention path to improve model fit (according to LR χ^2) indicated that intervention effects were completely mediated by intervening constructs; a significant LR χ^2 indicated that the effect was at least partially direct, or mediated by constructs not included in the model. Results of these tests are in the second panel of Table III.

Table III (first panel) shows that the advocacy intervention had direct effects on all but three outcome constructs. The intervention had a significant direct effect on each construct at post (social support, resources, reabuse, quality of life); on social support and quality of life at 12-month

Table III. Tests of Mediation: Direct Intervention Effects With and Without the Estimation of Indirect Effects

Mediator and outcome variables	Direct effects of the intervention on mediator and outcome variables: unpartialled direct intervention effects (standardized)[a]	Reduced direct intervention effects due to mediation: partialled direct intervention effects (standardized)[b]	LR χ^2 (1 df)
Postintervention			
Social support	.294***	—	—
Resources	.432***	—	—
Reabuse	−.138**	—	—
Quality of life	.201***	−.069	1.661
12-month follow-up			
Social support	.095*	−.057	1.020
Resources	.020	—	—
Reabuse	−.040	—	—
Quality of life	.117*	.051	1.230
24-month follow-up			
Social support	.004	—	—
Resources	.171**	.122*	4.974*
Reabuse	−.104*	.013	0.009
Quality of life	.101*	−.063	1.193

Note. Tests of significance of individual effects and LR χ^2 tests are directional.
[a]Unpartialled direct intervention effects are estimated with the indirect effects of intervention through intervening variables set to 0.
[b]Partialled direct intervention effects are estimated with the indirect effects of intervention through intervening variables also estimated and therefore partialled out or controlled. Not reported when unpartialled direct effects are not significant. Not applicable where model indicates no intervening effects (i.e., social support, resources, or reabuse at postintervention).
*** $p < .001$. ** $p < .01$. * $p < .05$.

follow-up; and on resources, reabuse, and quality of life at 24-month follow-up. Where the unpartialled direct effects were significantly greater than zero, the second panel of Table III shows the reduction of direct intervention effect when indirect effects were also estimated. In all cases these partialled direct effects were smaller in magnitude than the unpartialled effects and were significantly different from zero for only one outcome—access to resources at 24-month follow-up. This pattern confirms that the significant long-term effects of the intervention on social support, reabuse, and quality of life were completely mediated by the constructs in the model. For access to resources at 24-month follow-up, the effect of the intervention was partially mediated by the modeled constructs, although there was also a significant direct effect that was not explained by the model.

The multistep process for testing mediation identified nine constructs that were directly affected by the advocacy intervention. These are identified in bold in Fig. 2. Paths linking these constructs are also in bold to indicate

mediational paths through which the effects of the intervention are transmitted. Constructs that are not in bold showed no significant direct effects of the intervention and, according to the criteria of Baron and Kenny (1986), could not be mediators of intervention effects. Paths passing through these three constructs are therefore not mediational paths. Thus, because there was no significant direct effect of the intervention on reabuse at 12-month follow-up, the intervention effect on reabuse at 24-month follow-up cannot be mediated by previous reabuse. Because the intervention had a significant impact on reabuse at postintervention, and postreabuse was significantly related to reabuse at 12-month follow-up, the path can be said to transmit an indirect effect (Holmbeck, 1997), but it does not meet the specific criteria for mediation. This interpretation is conservative, but it allows strong causal conclusions to be drawn about mediated effects in the context of a randomized experiment and avoids the misattribution of causal influences critiqued by Holland (1988) as "causes causing causes."

Table IV lists the standardized specific mediational paths linking the effects of the intervention to quality of life and reabuse outcomes at 24-month follow-up. Mediated effects were computed as the product of direct effects linking each of the mediators forming each specific path linking intervention to outcome. Standard errors for each specific mediational path were estimated through the multivariate delta method (Sobel, 1982, 1988). Each specific mediated effect was significantly nonzero at directional $p < .05$. Summing across the specific mediated effects, the total standardized mediated effect of the advocacy intervention on quality of life at 24-month follow-up was .045, and the total mediated effect of the intervention on reabuse at 24-month follow-up was $-.016$. Total standardized effects of the intervention on 24-month outcomes, including both mediated and other indirect effects, were substantially larger: .166 for quality of life and $-.072$ for reabuse.

The relative contribution of social support and resources to mediation of intervention effects changed over time. At postintervention, both were significant mediators of intervention effects on quality of life. Using MacKinnon's method for contrasting mediated effects (MacKinnon, 2000), it was possible to compare the magnitude of the two mediators' effects. At postintervention, significantly more of the intervention effect was mediated by social support than by access to resources (standardized contrast $= .195$, $p = .003$). At 12-month follow-up, social support continued to show significant mediation effects, whereas access to resources was not significantly affected by the intervention. By 24-month follow-up, however, social support was no longer involved in the mediational chain, whereas access to resources was a significant mediator of intervention effects on 24-month quality of life.

Table IV. Magnitude and Significance of Specific Mediational Paths Linking the Advocacy Intervention and Outcome at 24-month Follow-up[a]

Specific mediational paths	Standardized effect	Directional p[b]
Advocacy intervention effects on Quality of Life at 24-month follow-up		
Adv → SS_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $QOL_{24\text{-month}}$	.007	.02
Adv → SS_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $Res_{24\text{-month}}$ → $QOL_{24\text{-month}}$	.005	.02
Adv → SS_{post} → QOL_{post} → $QOL_{12\text{-month}}$ → $QOL_{24\text{-month}}$	.010	.03
Adv → SS_{post} → QOL_{post} → $QOL_{12\text{-month}}$ → $Res_{24\text{-month}}$ → $QOL_{24\text{-month}}$	.007	.01
Adv → SS_{post} → QOL_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $QOL_{24\text{-month}}$	.005	.05
Adv → SS_{post} → QOL_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $Res_{24\text{-month}}$ → $QOL_{24\text{-month}}$	.004	.02
Adv → Res_{post} → QOL_{post} → $QOL_{12\text{-month}}$ → $QOL_{24\text{-month}}$	.003	.05
Adv → Res_{post} → QOL_{post} → $QOL_{12\text{-month}}$ → $Res_{24\text{-month}}$ → $QOL_{24\text{-month}}$	.002	.03
Adv → Res_{post} → QOL_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ →$QOL_{24\text{-month}}$	.001	.03
Adv → Res_{post} → QOL_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $Res_{24\text{-month}}$ → $QOL_{24\text{-month}}$	.001	.04
Total mediated intervention effect on 24-month follow-up Quality of Life	.045	
Advocacy intervention effects on Reabuse at 24-month follow-up		
Adv → SS_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $Reabuse_{24\text{-month}}$	−.004	.04
Adv → SS_{post} → QOL_{post} → $QOL_{12\text{-month}}$ → $Reabuse_{24\text{-month}}$	−.006	.05
Adv → SS_{post} → QOL_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $Reabuse_{24\text{-month}}$	−.003	.04
Adv → Res_{post} → QOL_{post} → $QOL_{12\text{-month}}$ → $Reabuse_{24\text{-month}}$	−.002	.04
Adv → Res_{post} → QOL_{post} → $SS_{12\text{-month}}$ → $QOL_{12\text{-month}}$ → $Reabuse_{24\text{-month}}$	−.001	.04
Total mediated intervention effect on 24-month follow-up Reabuse	−.016	

Note. Adv = Advocacy intervention; SS = Social Support; Res = Resources; QOL = Quality of Life.

[a]This table includes the effects of paths through possible mediators of intervention effects; other indirect effects (i.e., those involving intervening variables that showed no significant unpartialled direct effect of the intervention) are omitted from this table.

[b]Standard errors are based on the multivariate delta method.

DISCUSSION

As hypothesized, the positive long-term effects of the advocacy intervention were mediated by the planned short-term intervention effects—increased social support and access to resources. Compared with women who left the battered women's shelter without advocates, women who worked with advocates for 10 weeks following shelter exit reported more social support, greater effectiveness at accessing resources, higher quality of life, and less reabuse by an intimate partner. Improvement in quality of life persisted over time and mediated (or explained) the intervention's positive effects on social support at 12-month follow-up, access to resources at 24-month follow-up, and reabuse at 24-month follow-up. This pattern of findings suggests that the long term success of the intervention was not merely due to the continuation of initial effects. Rather, a substantial proportion of the positive effect of the intervention on reabuse was delayed and resulted from earlier positive change in social support, access to resources, and quality of life. These changes were set in motion by the intervention but were not observed until longer-term follow-up. This finding speaks to the importance of conducting longitudinal studies with enough time points to detect delayed effects as well as continued and/or variant change within and between groups.

The intervention affected reabuse in two ways. First, there was a short-term reduction in abuse following the intervention period, which was attributed to the protective presence of the advocates working with women in their homes and community 6–8 hr each week. Second, there was a longer-term impact on reabuse that was explained by the intervention's improving women's quality of life. Working with an advocate had an immediate positive effect on women's social support and effectiveness at obtaining resources, which led to improvement in their subjective well-being or quality of life. Over time, this improved quality of life led to significant protection from reabuse.

There are several possible mechanisms by which women's quality of life may affect the likelihood of their reabuse. First, enhanced quality of life may be a simple reflection of women's supports and resources and their relevance to women's needs and desires. Second, quality of life may be important as a predictor of women's future ability to generate needed resources or to mobilize supports in times of future need. Third, women's subjective sense of well-being or quality of life may influence their goals and strivings, causing them to expand or contract their sense of what is possible to do or achieve (Diener & Fujita, 1995). Fourth, experience of the positive emotions associated with enhanced well-being may broaden women's thought–action repertoires, resulting in greater ability to mobilize protective supports and resources (Fredrickson, 2001).

The intervention's initial effect on quality of life was mediated through both social support and women's effectiveness in obtaining resources. Social support was the stronger short-term mediator, relative to resource effectiveness. Some of the postintervention effects on social support undoubtedly reflected women's perceptions of support from their advocates. However, the persistence of these effects to 12-month follow-up, well beyond the end of the intervention period and departure of the advocate, suggests that there was some transfer of perceived support from the advocates to other sources in the women's community, perhaps through the process described by Norris and Kaniasty (1996), in which actual provision of support (e.g., through the advocacy intervention) leads to more generalized presumptions of support.

Social support is a critical resource for women with abusive partners or ex-partners. Abusive men often rely on isolating their victims from supportive family and friends in order to escape detection and to limit women's options for help (Browne, 1997; Dobash et al., 1985). As women's social support increases, then, so do their options not only for escape once violence has occurred but for proactive assistance if violence is threatened or implied. Social support also serves in a more general sense to increase people's access to community resources and opportunities (Hobfoll & Lilly, 1993; Sarason, Sarason, & Pierce, 1990), some of which also serve to protect women from future assault. Access to employment, for example, can reduce women's economic dependence on abusive men (Okun, 1986; Rumptz & Sullivan, 1996). Access to housing and child care will provide an economically destitute woman with more options than choosing between living with an abusive man and living on the streets with her children. Women can similarly benefit from such resources as Personal Protection Orders, reliable transportation, and opportunities to continue their educations. Increased access to community resources can also enhance women's social support. For example, involvement in education or employment can expand a woman's social network and bring new sources of social support into her life; access to child care can enable women to make and maintain connections with others who may provide support and assistance.

Access to resources was also a significant mediator of short-term intervention effects on quality of life. Women who worked with advocates reported having been more effective in obtaining resources during the intervention period, and they reported greater access to resources two years later. However, there were no significant direct effects of advocacy on resources at 1-year follow-up, and no significant stability from effectiveness in obtaining resources during the intervention to access to resources 1 year later. Rather, intervention effects on access to resources at 2-year follow-up were completely mediated by intervening quality of life, as were the effects on reabuse at 2-year follow-up. The model implies that positive short-term

intervention effects (on both resources and reabuse) do not directly persist into long-term effects. Rather, the intervention's longer-term effects on resources and reabuse are expressed only through the intervening effect on quality of life. This suggests that it is critical for advocacy efforts to focus on obtaining the specific resources needed and desired by each individual woman, to maximize the impact of the intervention on her well-being and quality of life.

The current study employed a strong design and analysis plan, but it had some limitations that should be considered in weighing the findings. As is always the case with complex structural equation models, there may be other models that provide equally good fit to the observed data. Although the experimental design and longitudinal sequencing of effects rules out a number of alternative models, other possibilities remain, due to the moderate association between reabuse and quality of life within each time frame.

Study findings were somewhat limited by measurement issues. Women's access to resources was measured by only one scale postintervention, which resulted in our relying on a single indicator of this construct in the structural equation model. The measurement of reabuse was acontextual and focused on the frequency with which women had endured physically violent acts; other important aspects of abuse such as fear, intimidation, and control were not assessed. Reabuse measures were also limited psychometrically, in that they produced ordinal and count measures; two required variable transformation to reduce kurtosis and skew. Although successful, transformations affected the interpretation of the raw coefficients and added complexity to the model.

Another limitation of this study was that all participants had at one time been residents of a domestic violence shelter program. Most had low incomes, and all had previously sought help from their communities to deal with the abuse they were experiencing. The majority of participants were African American or non-Hispanic White, and none of the women lived in rural communities. The extent to which these findings can be generalized to women with higher incomes or women experiencing abuse in other communities is unknown. Additional studies are needed to evaluate this type of program with a more diverse sample of participants as well as with a more diverse type of advocate. All of the paraprofessional advocates in this study were undergraduate students earning course credits for their participation. It would be beneficial to implement and evaluate this intervention with advocates who were community volunteers or survivors of domestic violence themselves or both.

Finally, while significant, the effect of the intervention on women's reabuse over time was relatively small. This is not surprising, as the greatest risk factors for reabuse have to do with the men committing the violence,

and not with their victims. Although advocates may have helped enhance protective factors in women's lives (e.g., obtaining personal protection orders, locating safe housing, broadening women's supportive networks) these were not always sufficient to prevent abusive men from striking again. Advocacy for survivors of intimate partner violence is not enough by itself; rather, it must be one component of a coordinated community response to holding batterers accountable for their actions (Peled & Edleson, 1994; Sullivan & Keefe, 1999).

Although no one intervention will serve as a panacea for this complex social problem, continued positive change has now been shown to be an effect of an advocacy program that respected women's natural strengths and competencies (Iscoe, 1974), that was individualized to meet the unique needs of participants (Trickett, 1984), and that was guided by the women themselves (Davies, Lyon, & Monti-Catania, 1998). This finding has implications not only for those working to end domestic violence but for those working with other populations as well. Maximizing community members' access to resources is a central tenet of Community Psychology (Iscoe, 1974; Kelly, 1988; Trickett, 1984), and one that applies when working with any number of disenfranchised communities. Connection to community resources and opportunities is related to the degree to which people feel in control of their lives (Rappaport, 1977) and to their abilities to protect themselves and promote their well-being (Hobfoll & Lilly, 1993; Saleebey, 1997). This longitudinal study provides evidence that a strengths-oriented, community-based advocacy intervention can increase individuals' access to resources and social support, and that this does then continue to result in positive life changes over time.

REFERENCES

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103,* 411–423.

Andrews, F., & Withey, S. (1976). *Social indicators of well-being: Americans' perceptions of life quality.* New York: Plenum Press.

Baker, P. L. (1997). And I went back: Battered women's negotiation of choice. *Journal of Contemporary Ethnography*, *26*(1), 55–74.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51,* 1173–1182.

Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, *14,* 413–445.

Bentler, P. M. (1995). *EQS structural equations program manual.* Encino, CA: Multivariate Software.

Binney, V., Harkell, G., & Nixon, J. (1981). *Leaving violent men: A study of refuges and housing for battered women.* Leeds, Yorkshire: Women's Aid Federation.

Bogat, G. A., Chin, R., Sabbath, W., & Schwartz, C. (1983). The Adult's Social Support Questionnaire (Technical Report 2). East Lansing, MI: Michigan State University.
Bollen, K. A. (1989). *Structural equations with latent variables.* New York: Wiley.
Bowker, L. (1984). Coping with wife abuse: Personal and social networks. In A. R. Roberts (Ed.), *Battered women and their families: Intervention strategies and treatment programs* (pp. 168–191). New York: Springer.
Brown, R. L. (1997). Assessing specific mediational effects in complex theoretical models. *Structural Equation Modeling*, *4*(2), 142–156.
Browne, A. (1987). *When battered women kill.* New York: Free Press.
Browne, A. (1997). Violence in marriage: Until death do us part? In A. P. Cardarelli (Ed.), *Violence between intimate partners: Patterns, causes, and effects* (pp. 48–69). Needham Heights, MA: Allyn & Bacon.
Caralis, P. V., & Musialowski, R. (1997). Women's experiences with domestic violence and their attitudes and expectations regarding medical care of abuse victims. *Southern Medical Journal*, *90*(11), 1075–1080.
Collins, N., Dunkel-Schetter, C., Lobel, M., & Scrimshaw, S. (1993). Social support in pregnancy: Psychological correlates of birth outcomes and postpartum depression. *Journal of Personality and Social Psychology*, *65,* 1243–1258.
Davidson, W. S., & Rappaport, J. (1978). Advocacy and community psychology. In G. H. Weber & G. J. McCall, (Eds.), *Social scientists as advocates: Views from the applied disciplines.* Thousands Oaks, CA: Sage.
Davidson, W. S., Redner, R., Blakely, C. H., Mitchell, C. M., & Emshoff, J. G. (1987). Diversion of juvenile offenders: An experimental comparison. *Journal of Consulting and Clinical Psychology*, *55*(1), 68–75.
Davies, J., Lyon, E., & Monti-Catania, D. (1998). *Safety planning with battered women: Complex lives/difficult choices.* Thousand Oaks, CA: Sage.
Dennis, R. E., Williams, W., Giangreco, M. F., & Cloninger, C. J. (1993). Quality of life as context for planning and evaluation of services for people with disabilities. *Exceptional Children*, *59*(6), 499–512.
Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95,* 542–575.
Diener, E., & Fujita, F. (1995). Resources, personal strivings, and subjective well-being: A nomothetic and idiographic approach. *Journal of Personality and Social Psychology*, *68*(5), 926–935.
Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin*, *25*(2), 276–302.
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 the public services* (pp. 142–165). London: Routledge & Kegan Paul.
Downs, W. R., Miller, B. A., & Panek, D. D. (1993). Differential patterns of partner-to-woman violence: A comparison of samples of community, alcohol-abusing, and battered women. *Journal of Family Violence*, *8,* 113–135.
Dunst, C. J., Trivette, C. M., & Thompson, R. B. (1994). Supporting and strengthening family functioning: Toward a congruence between principle and practice. In C. J. Dunst, C. M. Trivette, & A. G. Deal (Eds.), *Supporting and strengthening families: Vol. 1. Methods, strategies and practices* (pp. 49–59). Cambridge, MA: Brookline.
Early, T. J., & GlenMaye, L. F. (2000). Valuing families: Social work practice with families from a strengths perspective. *Social Work*, *45*(2), 118–130.
Epstein, D. (1999). Effective intervention in domestic violence cases: Rethinking the roles of prosecutors, judges and the court system. *Yale Journal of Law and Feminism*, *11,* 3–50.
Fairweather, G. W., & Tornatzky, L. G. (1977). *Experimental methods for social policy research.* Elmsford, NY: Pergamon Press.
Finkel, S. E. (1995). *Causal analysis with panel data* (Quantitative applications in the social sciences No. 105). Thousand Oaks, CA: Sage.

Fraser, M. W., & Galinsky, M. J. (1997). Toward a resilience-based model of practice. In M. W. Fraser (Ed.), *Risk and resilience in childhood: An ecological perspective* (pp. 265–275). Washington, DC: National Academy of Social Work Press.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist*, *56,* 218–226.

Gollob, H. F., & Reichardt, C. S. (1991). Interpreting and estimating indirect effects assuming time lags really matter. In L. M. Collins & J. L. Horn (Eds.), *Best methods for the analysis of change: Recent advances, unanswered questions, future directions* (pp. 243–259). Washington, DC: American Psychological Association.

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

Hayduk, L. A. (1996). *LISREL: Issues, debates, and strategies.* Baltimore, MD: Johns Hopkins University Press.

Hobfoll, S. E., & Lilly, R. S. (1993). Resource conservation as a strategy for community psychology. *Journal of Community Psychology*, *21,* 128–148.

Holland, P. (1988). Causal inference and path analysis. *Sociological Methodology*, *18,* 449–484.

Holmbeck, G. (1997). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6,* 1–55

Hoyle, R. H., & Kenny, D. A. (1999). Sample size, reliability, and tests of statistical mediation. In R. H. Hoyle (Ed.), *Statistical strategies for small sample research* (pp. 195–222). Thousand Oaks, CA: Sage

Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Thousand Oaks, CA: Sage.

Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, *3*(4), 424–453.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55.

Hughes, C., Hwang, B., Kim, J., Eisenman, L., & Killian, D. (1995). Quality of life in applied research: A review and analysis of empirical measures. *American Journal of Mental Retardation*, *99*(6), 623–641.

Iscoe, I. (1974). Community psychology and the competent community. *American Psychologist*, *29,* 607–613.

Judd, C. M., & Kenny, D. A. (1981). Process analysis: Estimating mediation in treatment evaluations. *Evaluation Review*, *5,* 602–619.

Kaniasty, K., & Norris, F. (1992). Social support and victims of crime: Matching event, support, and outcome. *American Journal of Community Psychology*, *20,* 211–241.

Kelly, J. G. (1988). *A guide to conducting prevention research in the community: First steps.* New York: Haworth Press.

Kemp, A., Green, B., Hovanitz, C., & Rawlings, E. (1995). Incidence and correlates of posttraumatic stress disorder in battered women: Shelter and community samples. *Journal of Interpersonal Violence*, *10,* 43–55.

Kishton, J. M., & Widaman, K. F. (1994). Unidimensional versus domain representative parceling of questionnaire items: An empirical example. *Educational and Psychological Measurement*, *54,* 757–765.

Little, R. J. A., & Rubin, D. B. (1990). *Statistical analysis with missing data.* New York: Wiley Interscience.

MacKinnon, D. P. (2000). Contrasts in multiple mediator models. In J. S. Rose & L. Chassin (Eds.), *Multivariate applications in substance use research: New methods for new questions* (pp. 141–160). Mahwah, NJ: Erlbaum.

MacKinnon, D. P., & Dwyer, J. H. (1993). Estimating mediated effects in prevention studies. *Evaluation Review*, *17,* 144–158.

MacKinnon, D. P., Warsi, G., & Dwyer, J. H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, *30*(1), 41–62.

Miller, S. L., & Wellford, C. F. (1997). Patterns and correlates of interpersonal violence. In A. P. Cardarelli (Ed.), *Violence between intimate partners: Patterns, causes, and effects* (pp. 16–28). Needham Heights, MA: Allyn & Bacon.

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*(6), 629–654.

Norris, F. H., & Kaniasty, K. (1996). Received and perceived social support in times of stress: A test of the social support deterioration deterrence model. *Journal of Personality and Social Psychology*, *71*(3), 498–511.

Okun, L. (1986). *Woman abuse: Facts replacing myths.* Albany: State University of New York Press.

Peled, E., & Edleson, J. L. (1994). Advocacy for battered women: A national survey. *Journal of Family Violence*, *9*(3), 285–296.

Peled, E., Eisikovits, Z., Enosh, G., & Winstok, Z. (2000). Choice and empowerment for battered women who stay: Toward a constructivist model. *Social Work*, *45*(1), 9–25.

Powell, D. S., Batsche, C. J., Ferro, J., Fox, L., & Dunlap, G. (1997). A strengths-based approach in support of multi-risk families: Principles and issues. *Topics in Early Childhood Special Education*, *17*(1), 1–26.

Ptacek, J. (1997). The tactics and strategies of men who batter: Testimony from women seeking restraining orders. In A. P. Cardarelli (Ed.), *Violence between intimate partners: Patterns, causes, and effects* (pp. 104–123). Needham Heights, MA: Allyn & Bacon.

Rapp, C. A. (1998). *The strengths model: Case management with people suffering from severe and persistent mental illness.* NY: Oxford University Press.

Rappaport, J. (1977). *Community psychology: Values, research, and action.* New York: Holt, Rinehart, & Winston.

Rumptz, M. H., & Sullivan, C. M. (1996, March). *The impact of economic dependence on female survivors of intimate male violence*. Poster presentation at the 21st annual conference of the Association for Women in Psychology, Portland, OR.

Saleebey, D. (Ed.), (1997). *The strengths perspective in social work practice* (2nd ed.). White Plains, NY: Longman.

Sarason, B. R., Sarason, I. G., & Pierce, G. R. (1990). *Social support: An interactional view.* New York: Wiley.

Schalock, R. L. (1997). The conceptualization and measurement of quality of life: Current status and future considerations. *Journal on Developmental Disabilities*, *5*(2), 1–21.

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.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equations models. *Sociological Methodology*, *1982,* 290–312.

Sobel, M. E. (1988). Direct and indirect effects in linear structural equation models. In J. S. Long (Ed.), *Common problems/proper solutions: Avoiding error in quantitative research* (pp. 46–64). Newbury Park, CA: Sage.

Stark, E., & Flitcraft, A. (1996). *Women at risk: Domestic violence and women's health.* Thousand Oaks, CA: Sage.

Stark, J., & Goldsbury, T. (1990). Quality of life from childhood to adulthood. In R. Schalock & M. J. Bogale (Eds.), *Quality of life: Perspectives and issues* (pp. 71–84). Washington, DC: American Association of Mental Retardation.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage and the Family*, *41,* 75–88.

Straus, M. A., & Gelles, R. (1986). Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *Journal of Marriage and the Family*, *48,* 465–479.

Sullivan, C. M. (1991). Battered women as active helpseekers. *Violence Update*, *1*(12), 1, 8, 10–11.

Sullivan, C. M. (1997). Societal collusion and culpability in intimate male violence: The impact of community response toward women with abusive partners. In A. P. Cardarelli (Ed.),

Violence between intimate partners: Patterns, causes, and effects (pp. 154–164). Needham Heights, MA: Allyn & Bacon.

Sullivan, C. M. (2000). A model for effectively advocating for women with abusive partners. In J. P. Vincent & E. N. Jouriles (Eds.), *Domestic violence: Guidelines for research-informed practice* (pp. 126–143). London: Jessica Kingsley Publishers.

Sullivan, C. M., & Bybee, D. I. (1999). Reducing violence using community-based advocacy for women with abusive partners. *Journal of Consulting and Clinical Psychology*, *67*(1), 43–53.

Sullivan, C. M., Campbell, R., Angelique, H., Eby, K. K., & Davidson, W. S. (1994). An advocacy intervention program for women with abusive partners: Six month follow-up. *American Journal of Community Psychology*, *22*(1), 101–122.

Sullivan, C. M., & Keefe, M. (1999). A review of evaluations of the effectiveness of advocacy efforts to end intimate male violence against women. "Applied Research Forum" document for the National Electronic Network on Violence Against Women. Available at http://www.vaw.umn.edu/

Sullivan, C. M., Rumptz, M. H., Campbell, R., Eby, K. K., & Davidson, W. S. (1996). Retaining participants in longitudinal community research: A comprehensive protocol. *Journal of Applied Behavioral Science*, *32*(3), 262–276.

Sullivan, C. M., Tan, C., Basta, J., Rumptz, M., & Davidson, W. S. (1992). An advocacy intervention program for women with abusive partners: Initial evaluation. *American Journal of Community Psychology*, *20*(3), 309–322.

Tan, C., Basta, J., Sullivan, C. M., & Davidson, W. S. (1995). The role of social support in the lives of women exiting domestic violence shelters: An experimental study. *Journal of Interpersonal Violence*, *10*(4), 437–451.

Taylor, S., & Bogden, R. (1990). Quality of life and the individual's perspective. In R. Schalock & M. J. Bogale (Eds.), *Quality of life: Perspectives and issues* (pp. 27–40). Washington, DC: American Association of Mental Retardation.

Trickett, E. J. (1984). Toward a distinctive community psychology: An ecological metaphor for the conduct of community research and the nature of training. *American Journal of Community Psychology*, *12,* 261–279.

Wauchope, B. (1988). *Help-seeking decisions of battered women: A test of learned helplessness and two stress theories.* Paper presented at the Eastern Sociological Society, Durham, New Hampshire.

West, S. G., & Aiken, L. S. (1997). Toward understanding individual effects in multicomponent prevention programs: Design and analysis strategies. K. Bryant, M. Windle, & S. West (Eds.), *The science of prevention: Methodological advances from alcohol and substance abuse research* (pp. 167–209). Washington, DC: American Psychological Association.

Wothke, W. (1998). Longitudinal and multi-group modeling with missing data. In T. D. Little, K. U. Schnabel, & J. Baumert (Eds.), *Modeling longitudinal and multiple group data: Practical issues, applied approaches and specific examples* (pp. 219–240). Mahwah, NJ: Erlbaum.