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Ecological Model of Battered Women's Experience over Time:

FINAL REPORT

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EXECUTIVE SUMMARY

Although research on intimate partner violence (IPV) has proliferated over the past 25 years, we still know relatively little about how battered women's experience of abuse and its consequences changes over time, especially during and following specific community and legal interventions. Indeed, the Panel on Research on Violence Against Women, established by the National Research Council in 1995, recommended that "longitudinal research should be undertaken to study the developmental trajectory of violence against women" (Crowell & Burgess, 1996, p. 90). This study was designed to deepen our understanding of IPV victims' experience over time. Specific goals of the study were to examine 1) trajectories of intimate partner violence; 2) trajectories of employment and emotional wellbeing for victims of intimate partner violence; 3) potential predictors of these patterns, identified based on an ecological or contextual model (Bronfenbrenner, 1986), and 4) the prediction of revictimization. This model situates the individual and her characteristics within her larger social context by investigating the influence of a broader set of factors on individual-level phenomena. Thus, this study goes beyond individual characteristics of the batterer or victim to identify contributors to patterns of IPV that are rooted in the larger community and the battered women's social support system.

Over the course of seven months (June, 1999 to January, 2000) we recruited a total of 406 women as they sought help for intimate violence at the hands of a current or former male partner. Following an initial interview at one of three sites in Baltimore (Time 1), we re-contacted and conducted phone interviews with these women every three months for the next year (Phase I: Times 2, 3, 4, and 5) and then every four to six months after that for a total of five additional time points (Phase II: Times 6, 7, 8, 9, and 10). The Time 6 data wave was funded by a grant from the National Institute of Mental Health. Overall, the study followed the original group of women for 4.5 years.

KEY FINDINGS TO DATE

- **The intimate partner violence (IPV) experienced by battered women is not uniform.** Three patterns of IPV were identified: Moderate (moderate levels of physical, psychological abuse, low levels of sexual abuse), High without Sexual Abuse (high levels of physical and psychological abuse, low levels of sexual abuse), and High with Sexual Abuse (high levels of physical, psychological, and sexual abuse). These groups differed on employment, quality of life, PTSD, depression, suicidal thoughts, danger assessment, threat appraisal, desire to continue relationship, the types of community interventions used, and IPV revictimization, but not on expectation of contact with or continued involvement with abuser. (*Dutton, Kaltman, Goodman, Weinfurt, & Vankos, N., 2005*)
- **Over one-third (38.3%) of participants reported reabuse during at least one 3-month period over the course of one year, with most of it occurring during the first three months.** Results underscore social support as a critical protective factor, especially for women with less severe violence, and resistance strategies as key risk factors. Over the past decade or so, an emerging body of research has demonstrated some of the batterer characteristics and behaviors that increase women's risk for repeat abuse over time. Surprisingly little is known, however, about risk and protective factors that women themselves can influence. Such information could be invaluable for frontline workers who do safety planning, education, and intervention with women in courts, shelters, health care clinics, or counseling offices (*Goodman, Dutton, Weinfurt, & Vankos, 2005*).
- **Level of past year sexual and physical violence was associated with unemployment and income under the poverty level at baseline.** The prevalence of intimate partner violence (IPV) and its mental health correlates are well-documented. However, the functional outcomes of IPV, including occupational functioning, rarely have

been studied. The current study examines prospectively the impact of IPV, PTSD and depression on work status, income, and access to resources. Level of violence also predicted being unemployed, change in employment, and less access to resources one year later. PTSD predicted income under the poverty level at baseline and less access to resources one year later. Depression predicted unemployment and income under the poverty level at baseline, as well as unemployment, change in employment, and less access to resources one year later. The mental health findings were no longer significant when level of baseline violence was controlled, suggesting that it is the experience of IPV that drives the negative impact on occupational functioning. (*Kaltman & Dutton, 2004*)

- **Women who did not rely on the abuser for material resources, those who did not plan to continue their relationship with him, and those perceiving a high risk of future violence were more likely to want a conviction.** More victims of intimate partner violence seek help from the criminal justice system than access mental health, medical, shelter, advocacy or other services. Yet more than half of the battered women who enter the justice system ultimately attempt to dismiss charges or refuse to cooperate with the prosecution process. Given how frustrating and confusing this phenomenon is for a range of criminal justice system actors, it is surprising that researchers have paid so little attention to the dynamics and correlates of women's decision-making about the system. Using an ecological model, this study sought to identify predictors of battered women's desire for a criminal prosecution of their batterers. (*Bell, Goodman, & Dutton, 2003*)
- **Although resistance and placating are the two types of strategies most commonly used by victims of IPV, they are also rated the least helpful. The individual strategy rated most helpful by participants was talking to someone at a domestic**

violence program. Women facing abuse at the hands of their intimate partners use a wide variety of strategies to stop, prevent, or escape from the violence, ranging from private attempts to reason with abusive partners, to fighting back, calling the police or seeking help from a shelter. Although research has documented the myriad ways that victims of intimate partner violence struggle to keep themselves safe, little research has gone the next step to investigate patterns in women's use of strategies, factors that influence choice of strategies, or which strategies are most effective. Such knowledge could contribute to interventions that build on women's strengths, capabilities, and coping styles, as well as their own sense of how to keep themselves safe. The Intimate Partner Violence Strategies Index is a new measure for assessing women's strategies for dealing with intimate partner violence which includes six categories of strategies (safety planning, legal, formal network, informal network, placating, resisting). Safety planning, legal, formal networks and informal networks were rated as most helpful categories and placating and resisting as least helpful. (*Goodman, Dutton, Weinfurt, & Cook, 2003*).

- **Compared to Caucasian women in the sample, African American women were significantly more likely to report using prayer as a coping strategy and significantly less likely to seek help from mental health counselors.** The two groups did not significantly differ on the extent to which they sought help from clergy or medical professionals. A comparison of helpfulness ratings indicated that African-American women found prayer to be more helpful than did Caucasian women. (*El-Khoury, Dutton, Goodman, Belamaric, Murphy, 2004*).

INTRODUCTION

The Problem

Although research on intimate partner violence (IPV) has proliferated over the past 25 years, we still know relatively little about how battered women's experience of abuse and its consequences changes over time, especially during and following specific community and legal interventions. Indeed, the Panel on Research on Violence Against Women, established by the National Research Council in 1995, recommended that "longitudinal research should be undertaken to study the developmental trajectory of violence against women" (Crowell & Burgess, 1996, p. 90). Despite this recommendation, only a few studies have tracked battered women's experience of IPV and its consequences over time; and fewer still have documented factors that predict patterns of reabuse. Finally, very little research has explored battered women's own perceptions of risk, either as an important outcome in its own right, or as a potentially valuable predictor of risk of repeat IPV. Without such knowledge, it is difficult to develop new ideas for combating IPV or to determine whether specific interventions are working to reduce IPV and its consequences. It is also difficult to know how best to advise women or how to determine which factors may present the greatest risk.

Project Goals and Objectives

This study was designed to deepen our understanding of IPV victims' experience over time. Specific goals of the study were to examine 1) trajectories of intimate partner violence; 2) trajectories of employment and emotional wellbeing for victims of intimate partner violence; 3) potential predictors of these patterns, identified based on an ecological or contextual model (Bronfenbrenner, 1986), and 4) the prediction of revictimization. This model situates the individual and her characteristics within her larger social context by investigating the influence of a broader set of factors on individual-level phenomena. Thus, this study goes beyond individual

characteristics of the batterer or victim to identify contributors to patterns of IPV that are rooted in the larger community and the battered women's social support system.

Research Literature

Available research has only begun to describe the longitudinal trajectory of IPV and its unfolding impact on women's experience. Even less is known about what kinds of factors contribute to violence escalation or de-escalation, or about the extent to which women are able to assess their own risk accurately.

Longitudinal Patterns of IPV over Time

Few studies have explored patterns of IPV and its consequences as they unfold over time. Data from Feld and Straus' (1990) two-year panel study based a national probability sample showed that, of men who had committed three or more severe acts of wife assault in the year prior to the first interview, about two-thirds committed additional acts during the following year. A second smaller longitudinal study found that in a community sample of 51 IPV victims who responded to advertisements about the study (Ulrich, 1998), 25% of participants reported continued abuse two and one-half years later. A third longitudinal study, which focused on batterers under court ordered treatment (Gondolf & White, 2001), found that, according to victims' reports, 41% of the men committed a reassault during the 30-month follow-up. This represents a 7% increase over the 15-month assault rate. Two-thirds of first reassaults occurred within the first six months. Finally, findings from the most comprehensive longitudinal study of IPV victims conducted thus far (Sullivan & Bybee, 1999) indicated that among 278 battered women recruited from a shelter, half of whom received volunteer advocacy services, median time to first reabuse was 3 months for the control condition and 9 months for the advocacy condition. The probability of reabuse (given that it had not yet happened) leveled off at approximately 15 months for the advocacy group, but continued to escalate through to the end of the 24 month follow-up period for the comparison group. Altogether, one in four of the

women in the advocacy condition and nine of ten women in the control condition experienced recurrent IPV at some point across the 24 months of post-intervention follow-up.

Taken together, the longitudinal studies described above demonstrate that IPV cannot be understood without investigating its evolution in the lives of women over time. These studies also point to the importance of an extended follow-up period in order to capture variations in patterns of abuse and its effects over time. Although these studies offer important glimpses into the unfolding nature of battered women's experience, each focused on a narrow slice of the population of battered women or, in the case of Straus' study, followed participants for only 12 months. Sullivan's sample was restricted to women exiting a shelter. Campbell's sample was composed of a self-selected group who responded to an advertisement about the study, and only 48% of the original sample were available at follow-up. And Gondolf's participants included only women whose partners were involved in batterer treatment. Finally, these studies did not incorporate battered women's subjective appraisal of their own risk and safety, either as an outcome or as a predictor of actual IPV. Our study investigated trajectories of IPV and subjective risk appraisal over a three-year period and was based on a large sample of women who had received one of three major system interventions: civil protection orders, criminal prosecution, and shelter.

Longitudinal Patterns of Employment and Emotional Well-Being over Time

Although none of these longitudinal studies focused specifically on the unfolding nature of battered women's emotional well-being over time, Campbell and Soeken (1999) did find, not surprisingly, that women who continued to be abused after three and one-half years reported significantly higher levels of emotional distress (including depression and stress) than those who remained free of abuse during the follow-up period. Further, Sullivan (2000) found that women who participated in the advocacy intervention reported higher quality of life, higher social support, and fewer depressive symptoms than those in the comparison group; but both groups reported improvements along these dimensions over the course of the follow-up period.

Although these findings are interesting and important, they do not provide a comprehensive picture of how battered women's' emotional well-being shifts over time.

In addition, none of these studies explored the potential contribution of IPV to women's ability to sustain employment over time. Yet, a review of several studies documenting the relationship between domestic violence and welfare concludes, "domestic violence presents a barrier to sustained labor market participation (Raphael & Tolman, 1997), p 22)." For example, a recent study (Browne, Salomon, & Bassuk, 1999), of a sample of almost exclusively AFDC recipients found that those who had experienced domestic violence during a previous 12-month period had only one-third the odds of maintaining employment for at least 30 hours a week for 6 months or more compared to those who had not experienced domestic violence during that period. However, this study was not able to examine the temporal relationship between violence and work within the 12-month period, nor factors that contribute to battered women's employment difficulties. These authors call for further analyses of the mechanisms by which partner violence might affect women's ability to work over a longer period of time.

Prediction of Battered Women's Experience over Time

Although there has been some research on predicting reabuse among battered women, most of it has emphasized the role of batterer characteristics. Since very little research has investigated patterns of IPV from an ecological perspective, little is known about risk and protective factors in battered women's social context.

Community interventions. One notable exception is Sullivan's longitudinal study of battered women exiting a shelter. As noted above, women who received a 10-week volunteer advocacy intervention were half as likely to be revictimized over the next two years as women who did not receive these services. A second quasi-experimental study (Belle & Goodman, 2000) found similar results among IPV victims seeking a civil order of protection from a law school clinic.

The role of other forms of legal intervention, including civil protection orders, is less clear, though preliminary evidence suggests that for women who seek temporary civil protection

orders, following through to get a permanent order does not appear to decrease future violence (see e.g. Harrell & Smith, 1996; Keilitz, Hannaford & Efke, 1997).

Social support. Sullivan (2000) found that among her sample of IPV victims (those who did and did not receive the advocacy intervention), women with less access to social support over time were at greater risk of abuse two years post-intervention than women who had stronger support systems. Interestingly, Cazenave and Straus (1999) found that in their national probability sample, embeddedness in a network of family and friends was not associated with interpersonal violence in the White participants but was associated with less violence against the Black women in the sample. These studies provide strong support for the role of social support in reducing rates of IPV, perhaps particularly among African American women. Consistent with Folkman and Lazarus' theory of coping (Folkman & Lazarus, 1980; Folkman, 1984), we hypothesized that a battered woman's decision to seek help to end her abuse is related not only to the severity of the abuse but also to the number of interpersonal (and tangible) resources to which she has access.

Employment and economic autonomy. Sullivan (2000) also found that women lacking financial resources were at greater risk after two years than women who prospered economically. This finding is consistent with that of Benson and Fox (2000). These researchers used data from waves one and two of the National Survey of Families and Households to explore longitudinally the role of employment in women's risk of repeat IPV. They found that controlling for violence at Time 1, employment instability and subjective financial strain increased the likelihood of violence against women in intimate relationships at Time 2.

Emotional well-being. Finally, Sullivan (2000) also explored the potential contribution of emotional well-being to women's risk of IPV. Interestingly, she found that quality of life predicted risk of reabuse in her sample, rather than risk of reabuse predicting quality of life. She interprets this latter finding to suggest that increasing women's opportunities for self-determination and autonomy would decrease their risk for IPV.

Women's use of strategies. Battered women employ numerous coping strategies to end the violence in their lives, and often actively seek assistance (Bowker, 1984; Gelles & Straus, 1998; Gondolf, 1988). Although research on battered women's strategies has shown that the number and diversity of strategies women use increases with the severity of the violence they have endured (Bowker, 1984, 1987; Wauchope, 1998), longitudinal research has yet to explore how various types of strategies predict patterns of repeat IPV over time, or how subgroups of women differ in the strategies they employ.

Predictive Utility of Combining Objective Risk Factors and Subjective Appraisal of Violence

Although a small body of research points to the potential utility of risk assessment tools in predicting the likelihood of repeat IPV (see e.g. Campbell, 1995; Goodman, Dutton & Bennett, 2000), only recently have researchers begun to address the predictive utility of battered women's subjective risk appraisals (Weisz, Tolman, & Saunders, 2000). These authors found that predictions of severe violence were significantly related to their report of actual severe violence four months later. This study suggests the importance of including battered women's own assessments of their future risk in any formal risk assessment. Yet, women's own subjective appraisals are not currently incorporated within current risk assessment methods (e.g., the Danger Assessment scale). We hoped to identify specific items pertaining to women's subjective appraisal of risk that might improve the performance of objective risk factors contained in the Danger Assessment scale.

Summary

While the above-reviewed studies provide important information about how interpersonal violence unfolds in select samples of battered women, a much more complete picture is needed -- one that covers a longer time period and a broader sample of women. Much more information is also needed about how the unfolding of interpersonal violence in women's lives shape their emotional well-being and employment; and about contributors to ongoing violence and its cessation . While research by Sullivan and her colleagues demonstrated the efficacy of

post-shelter advocacy services, none of these studies explored the role of the two typical community interventions (civil protection orders and domestic violence criminal prosecution) or other strategies (both public and private) that battered women are likely to use in their attempts to end the violence in their lives. Finally, few researchers have explored women's own appraisal of their risk or how these appraisals are related to or supplement standard risk assessment tools. This information is vital for more effective safety planning and intervention with battered women, particularly those involved in the justice system.

METHOD

Recruitment and Retention

Over the course of seven months (June, 1999 to January, 2000) we recruited a total of 406 women as they sought help for intimate violence at the hands of a current or former male partner. Following an initial interview at one of three sites in Baltimore (Time 1), we re-contacted and conducted phone interviews with these women every three months for the next year (Phase I: Times 2, 3, 4, and 5) and then every four to six months after that for a total of five additional time points (Phase II: Times 6, 7, 8, 9, and 10). The Time 6 data wave was funded by a grant from the National Institute of Mental Health. Overall, the study followed the original group of women for 4.5 years.

Table 1. Recruitment Statistics across Three Sites

	Recruitment Sites			Totals
	Criminal	Civil	Shelter	
Approached	277	419	97	793
Eligible	261	395	83	739
Agreed	152	309	68	528
Completed (on-site and mail-in)	118	220	68	406
Mail-ins distributed	135	98	0	233
Mail-ins returned	36	76	0	112
Mail-ins not returned	99	22	0	121

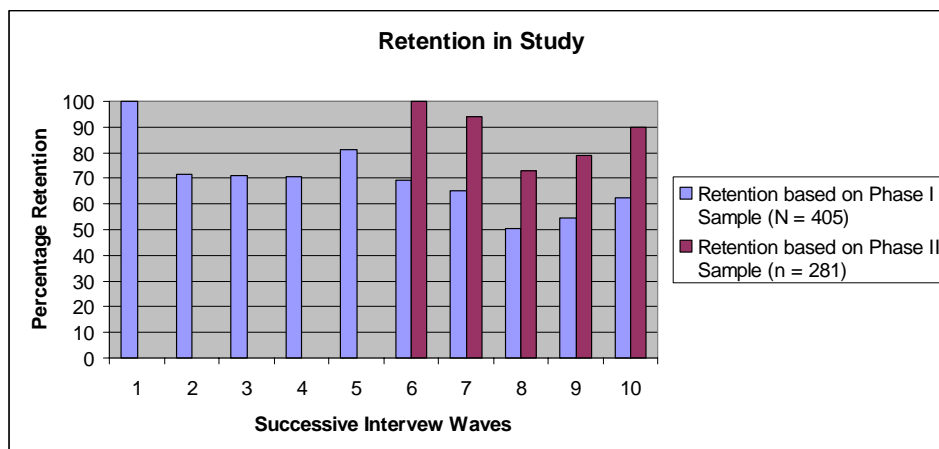
The first site, the House of Ruth Shelter, was the main crisis shelter for battered women and their children in the city of Baltimore. Sixty-eight participants were recruited from the shelter within the first 30 days of their stay there. The second site, the District Court, Civil Division, handles petitions for civil protection orders. Two hundred and twenty participants seeking an initial temporary restraining order were recruited from this site. The third site, the District Court, Domestic Violence Criminal Docket, is a specialized court handling most domestic violence

misdemeanor cases in the city. One hundred and eighteen participants were recruited outside the courtroom following the final disposition of a criminal case against their partners.

Procedures

Time 1 interviews

Law students were trained as research assistants to recruit participants and administer Time 1 questionnaires. They described the study briefly to all potential participants and then conducted a brief screening to ensure their eligibility. To participate in the study, a woman had to be a victim of IPV perpetrated by a man who is a current or former intimate partner, English speaking, sober and without significantly impaired mental status at the time of the initial interview. As part of informed consent, each potential participant was advised that a researcher would contact her by telephone every three months for the next year at least. She was asked to provide detailed contact information and to answer a series of questions about how to maximize her safety during follow-up phone contacts. The initial interview/questionnaire required approximately 45 – 60 minutes in order to complete and participants were paid \$20 for their time. Participants who agreed to do so (n = 294) completed the questionnaire on their own



in a private room, or by interview, according to their preference.

Participants who were willing to participate in the

study, but unable to do so at the time, were offered the questionnaire to return by mail via a stamped envelope (n = 112). The overall refusal rate among women we attempted to recruit was 28.6%. A number of reasons were given for refusing to participate, but most were related to time constraints.

Follow-up interviews

As part of the T1 informed consent procedure, each potential participant was advised that a researcher would contact her by telephone every three months for the next year (Phase I). If participants agreed to participate, they were asked to provide not only contact information for themselves, but also for several other people who would know how to reach them in three months. They were also asked with whom it was safe to leave a message and best times to call.

Follow-up telephone interviews required an average 45 – 60 minutes to complete. Follow-up interviewers included four female clinical psychology graduate students trained to conduct structured phone interviews. Participants were paid \$20 for each successive interview, with the exception of the T5 interview at 12 months (final interview for Phase I), for which they were paid \$50. Participants were paid \$20 for the Time 6 interview, \$50 for the Time 6-9 interview, and \$60 for the Time 10 interview. (See Retention Rates in figure).

Sample Description

A summary of demographic information is included in Table 2. Most (81.2%) of the participants were African-American, and most (90.9%) had at least one child. About half (51%) were employed full-time and most (66.2%) had an income of less than \$15,000 annually. At Time 1, most (88.2%) of the sample reported severe physical abuse at the hands of the “index” partner. For 82.4% of the participants, the “index” IPV incident that brought them into contact with the shelter or legal system occurred within the past 3 months. Over one-third of the participants (39.4%) also reported prior experience with physical violence by another intimate partner. Some form of childhood physical or sexual abuse was reported by 53.1% of the sample. Although women were recruited from three different community (shelter) or legal systems (civil protection order court, domestic violence criminal court), many reported involvement with more than one, resulting in the following categories: Criminal only (n = 79,

Table 2. Sample Demographic Characteristics

Variable	%
Ethnicity	
African-American	81.2
Anglo	13.0
Other	5.8
Children	
At least one child	90.9
Children in home	78.9
Children with abusive partner	45.4
Employment	
Unemployed	25.4
Employed full-time	51.0
Employed part-time	11.9
Income	
Less than \$5,000	37.5
\$6,000-\$15,000	28.7
\$16,000-\$25,000	20.2
\$26,000 and above	13.4
Public Assistance	35.2
Public housing	7.0
Medicaid	98.6
WIC	28.9
Food stamps	65.6
Education	
Less than high-school	27.0
High school	28.7
Technical school	7.2
Some College	27.7
Two-year College	3.5
Four-year College	3.7
Some Grad. School	2.2
Relationship status	
Intact	68.9
Estranged	31.1
Marital status	
Married	42.1
Boyfriend	57.9
Living arrangement	
Lives together	73.0
Lives separately	27.0

20.2%); Civil only (n = 145, 37%); Criminal + Civil (n = 100, 25.5%); and Shelter (including either civil or criminal, or neither, or both) (n = 68, 17.3%).

Measures

Demographic Information

We elicited information from participants on a range of demographic factors, including age, ethnicity, children, education, employment, living situation, and current relationship status.

Violence, Abuse, and Threat Appraisal

Intimate partner violence was measured using a modified version of the Conflict Tactics Scale-2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1995). The items in each subscale ask if, in the past

year, the participant has experienced specific acts of sexual abuse and physical abuse or specific types of injuries from the abuse. For ease and speed of administration, as well as consistency with the rest of the protocol, we gave participants a yes/no response choice rather than asking about frequency. We also consolidated the seven sexual abuse items into four, thereby eliminating items that asked about his “insisting” on sex without the use of force or threats. We also created a new item: “I had sex with him because I was afraid of what he would do if I didn’t.” At time 1, we asked these questions with regard to the last year with participants’ current partners and with regard to prior partners. At subsequent time periods, we asked about the period of time since we last interviewed the participant. Response choices were yes or no. All endorsed items were summed to produce scores for each subscale and an overall score. Also, consistent with Straus et al. (1995), we distinguished between “severe” and “less severe” abuse for the Physical Assault and Injury Subscales, with severe physical assault including kicking, punching, or hitting with something, slamming against a wall, choking, burning, “beating up,” or using a knife or gun, and severe Injury including passing out from being hit on the head in a fight with the abuser, needing to go or actually going to a doctor because of a fight with him, or having a broken bone from a fight with him.

To measure *psychological abuse*, we used the short form (13-item) of the Psychological Maltreatment of Women Inventory (PMI-Short Form; Tolman, 1995). This inventory asks whether participants have experienced a variety of acts of forms of psychological abuse, ranging from “he swore at me” to “he watched over my activities and insisted I tell him where I

was at all times.” Response choices range from 1 (never) to 5 (a lot). The PMWI is composed of two subscales designed to measure dominance-isolation and emotional-verbal psychological abuse (Tolman, 1989). The short form has been shown to successfully discriminate battered and non-battered women (Tolman, 1995).

To measure *stalking*, we modified items from the Violence Against Women survey (Tjaden & Thoennes, 2000). Wording changes were made to simplify the language, one item was added (“He hurt or killed my pet”), and one was eliminated. Items were answered as “yes” or “no.” A score reflecting the percentage of the seven stalking items endorsed was calculated.

We developed a Job *Interference Scale*, composed of items that ask about ways in which an abuser may have interfered with a participant’s ability to work or look for work. Several items were taken from a scale by Jody Raphael (Raphael, 1996; Raphael & Tolman, 1997) to measure domestic violence-related obstacles to employment among welfare recipients, and others were based on conversations with advocates and battered women.

We developed a measure of *IPV Threat Appraisal* from the index intimate partner, based on a conceptual model of batterer-generated risks developed by Jill Davies and colleagues (Davies, Lyon, & Monti-Catania, 1998). Each of the 14 items asks participants to assess the risk that the batterer will inflict specific forms of harm over the next 12 months, ranging from physical violence to kidnapping the children. Subscales were generated to measure violent, nonviolent, and child-related threats toward the participant or others close to her. Participants were asked to rate on a 5-point Likert-type scale how likely they believed the index partner was to engage in each of the threat items during the next year. Alpha coefficients for the three subscales were .81 for child-related threats, .85 for violent threats, and .85 for nonviolent threats and .91 for total threats.

We also used the *Danger Assessment Scale* (Campbell, 1995), a 15-item instrument containing objective risk factors related to homicide or serious injury in battering relationships.

Emotional Well-Being

The 9-item *Quality of Life Scale* (Andrews & Withey, 1976) modified by Sullivan (Sullivan & Bybee, 1999) was used to measure participants' satisfaction with the overall quality of their lives.

The *Center for Epidemiological Studies Depression Scale* (Radloff, 1977) is a 20-item scale assessing severity of depressive symptoms.

The *PTSD Checklist* (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996) provides scores for symptom clusters (i.e., intrusion, avoidance, arousal) as well as information to derive probable PTSD diagnoses.

To measure *substance use*, we used three questions, adapted from research developed by Gondolf and his colleagues that asked participants how often in the last month they 1) drank alcohol, 2) drank to intoxication, and 3) used street drugs.

IPV Coping Strategies

The IPV Strategies Index (Goodman, Dutton, Weinfurt, & Cook, 2003) was designed to assess the range of strategies women use to deal with the violence in their lives. Items were developed based on prior research (e.g. Bowker, 1984; Dutton, 1992; Gondolf & Fisher, 1988), our own professional experience with battered women, conversations with advocates, and a focus group with sheltered battered women. The scale is composed of 6 subscales measuring different types of strategies, including Placating, Resisting, Safety Planning, Use of Informal Help Sources, Use of Formal Help Sources, and Use of Legal Resources. Category scores represent the percentage of items endorsed within each category, and the total score represents the mean of these percentages. Helpfulness scores were obtained by asking women to note on a five-point scale (from not at all - extremely) how helpful each strategy was in dealing with the violence.

Community and Legal Interventions

We developed the *Community Interventions Scale* in Phase I to determine the extent to which participants were involved with the community and legal interventions that were a focus of this study. Women were asked about their own current involvement in community systems, including criminal prosecution, civil protection orders, and shelter at baseline and throughout the study.

Social Support

The *Interpersonal Support Evaluation List (ISEL)* (Cohen, Mermelstein, Kamarack, & Hoberman, 1985) is a 40-item true-false instrument that measures perceived availability of social resources in four categories: tangible support (e.g. availability of material aid); appraisal support (e.g. availability of someone to talk to about problems); esteem support (e.g. availability of positive comparisons to others); and belonging support (e.g. availability of people with whom one can do things).

Archival Records

As part of this project, we obtained information from the civil and criminal court records of all participants. Information from civil court records included the official dispositions of the petitions for protection orders, including the nature of the specific remedies sought and ordered, as well as requests for an extension of the civil protection order for a 1-year period following recruitment into the study. Information from the criminal court records included the official disposition of the domestic violence misdemeanor cases and any continued contact with the court related to the index criminal case (e.g., violation of probation) for a 1-year period following recruitment.

FINDINGS

- **The intimate partner violence (IPV) experienced by battered women is not uniform** (*Dutton, Kaltman, Goodman, Weinfurt, & Vankos, N., 2005*).

Three patterns of IPV were identified: Moderate (moderate levels of physical, psychological abuse, low levels of sexual abuse), High without Sexual Abuse (high levels of physical and psychological abuse, low levels of sexual abuse), and High with Sexual Abuse (high levels of physical, psychological, and sexual abuse). These groups differed on employment, quality of life, PTSD, depression, suicidal thoughts, danger assessment, threat appraisal, desire to continue relationship, the types of community interventions used, and IPV revictimization, but not on expectation of contact with or continued involvement with abuser. African-American women and those who were employed were more likely to have experienced Pattern 1 IPV. The duration of IPV was greater for those in Patterns 2 and 3 compared to Pattern 1. Consistent with greater severity, both IPV Pattern 2 and IPV Pattern 3 endorsed significantly higher levels of threat appraisal than those from IPV Pattern 1. Participants in IPV Pattern 2 (61%) were most likely to endorse experiencing revictimization during the year as compared to participants in IPV Pattern 1 (36%) and IPV Pattern 3 (47%).

Relatively more women with IPV Pattern 3 violence were recruited from the shelter and relatively more women with IPV Pattern 1 were recruited in the criminal court. Because women were eligible to engage multiple community interventions regardless of site of recruitment, the relationship between IPV patterns and community interventions pursued was also examined. Regardless of site of recruitment, IPV Pattern 3 participants were more likely to have sought help from a shelter. Those in Pattern 3 were less likely to desire to continue the relationship, however, differences in rates of actual involvement in the battering relationship were not significant at both Time 2 (3 months) and Time 5 (12 months).

IPV Pattern 3 was associated with significantly higher levels of PTSD symptoms and depression than IPV Pattern 2 which in turn was associated with significantly higher levels of symptomatology than IPV Pattern 1. IPV Pattern 1 participants reported significantly greater quality of life than participants in IPV Pattern 2 or IPV Pattern 3, which were not different from each other.

- **Over one-third (38.3%) of participants reported reabuse during at least one 3-month period over the course of one year, with most of it occurring during the first three months** (*Goodman, Dutton, Weinfurt, & Vankos, 2005*).

Results underscore social support as a critical protective factor, especially for women with less severe violence, and resistance strategies as key risk factors. Over the past decade or so, an emerging body of research has demonstrated some of the batterer characteristics and behaviors that increase women's risk for repeat abuse over time. Surprisingly little is known, however, about risk and protective factors that women themselves can influence. Such information could be invaluable for frontline workers who do safety planning, education, and intervention with women in courts, shelters, health care clinics, or counseling offices.

- **Level of past year sexual and physical violence was associated with unemployment and income under the poverty level at baseline** (*Kaltman & Dutton, 2004*).

The prevalence of intimate partner violence (IPV) and its mental health correlates are well-documented. However, the functional outcomes of IPV, including occupational functioning, rarely have been studied. The current study examines prospectively the impact of IPV, PTSD and depression on work status, income, and access to resources. Level of violence also predicted being unemployed, change in employment, and less access to resources one year later. PTSD predicted income under the poverty level at baseline and less access to resources one year later. Depression predicted unemployment and income under the poverty level at baseline, as well as unemployment, change in employment, and less access to resources one year later. The mental health findings were no longer significant when level of baseline violence was controlled, suggesting that it is the experience of IPV that drives the negative impact on occupational functioning.

- **Women who did not rely on the abuser for material resources, those who did not plan to continue their relationship with him, and those perceiving a high risk of future violence were more likely to want a conviction** (Bell, Goodman, & Dutton, in press).

More victims of intimate partner violence seek help from the criminal justice system than access mental health, medical, shelter, advocacy or other services. Yet more than half of the battered women who enter the justice system ultimately attempt to dismiss charges or refuse to cooperate with the prosecution process. Given how frustrating and confusing this phenomenon is for a range of criminal justice system actors, it is surprising that researchers have paid so little attention to the dynamics and correlates of women's decision-making about the system. Using an ecological model, this study sought to identify predictors of battered women's desire for a criminal prosecution of their batterers.

- **Although resistance and placating are the two types of strategies most commonly used by victims of IPV, they are also rated the least helpful. The strategy rated most helpful by participants was talking to someone at a domestic violence program** (Goodman, Dutton, Weinfurt, & Cook, 2003).

Women facing abuse at the hands of their intimate partners use a wide variety of strategies to stop, prevent, or escape from the violence, ranging from private attempts to reason with abusive partners, to fighting back, calling the police or seeking help from a shelter. Although research has documented the myriad ways that victims of intimate partner violence struggle to keep themselves safe, little research has gone the next step to investigate patterns in women's use of strategies, factors that influence choice of strategies, or which strategies are most effective. Such knowledge could contribute to interventions that build on women's strengths, capabilities, and coping styles, as well as their own sense of how to keep themselves safe. The

Intimate Partner Violence Strategies Index is a new measure for assessing women's strategies for dealing with intimate partner violence.

- **Compared to Caucasian women in the sample, African American women were significantly more likely to report using prayer as a coping strategy and significantly less likely to seek help from mental health counselors** (*El-Khoury, Dutton, Goodman, Belamaric, Murphy, 2004*).

The two groups did not significantly differ on the extent to which they sought help from clergy or medical professionals. A comparison of helpfulness ratings indicated that African-American women found prayer to be more helpful than did Caucasian women.

- **Women Who Have Children in Common with an Abuser Perceive Greater Threat** (*Belamaric et al., 2002*).

Qualitative research and case studies consistently report that having children in common with an abusive partner shapes battered women's victimization experiences and decision-making processes. In order to explore this question empirically, this study tested the hypothesis that women who share children with their abusive partner experience more severe abuse and perceive a higher level of threat than women who do not. Results of this study did not support the hypothesis that family structure differentiates the victimization experience of battered women. However, subjective threat appraisal was shown to be significantly higher for women who share children in common with their abusive partners. This article discusses these findings in the context of a broader discussion of possible relationships between family structure, threat appraisal, and victimization.

- **PTSD Numbing Symptoms Increases Risk for Reabuse** (Krause, Kaltman, Goodman, & Dutton, under review).

This prospective study examined the impact of four PTSD symptom clusters (hyperarousal, reexperiencing, numbing, and avoidance) on reabuse over one year among women exposed to intimate partner violence (IPV). It also included severity of IPV, a history of childhood violence,

and characteristics of the abusive relationship as covariates. While both hyperarousal and numbing symptoms were higher at baseline among women subsequently reabused, only numbing symptoms increased the odds of reabuse after controlling for the covariates. Greater IPV severity and shorter relationship duration also increased the risk of reabuse. Results indicate that specific symptoms of PTSD, especially numbing, may need to be addressed to increase the safety of women seeking services for IPV.

PRODUCTS TO DATE

Eight manuscripts have been published to date and an additional four are currently under review. A number of additional manuscripts are under review. Twelve manuscripts are under development. Twenty-seven presentations of data have been offered at various professional meetings. Finally, the data has the basis for six doctoral dissertations and two master's theses from three universities: George Washington University, American University, and Boston College.

Published Manuscripts in Refereed Journals (*alphabetical order*)

Belamaric, R., J., Dutton, M.A., Goodman, L. A., El-Khoury, M., Engel, L., & Murphy, M. (2003).

The role of family structure in battered women's violence victimization and threat appraisal over time. *Family Violence & Sexual Assault Bulletin*, 18(3), 15-21.

Bell, M.E., Goodman, L.A., & Dutton, M.A. (2003). Understanding domestic violence victims' decision-making in the justice system: Predicting desire for a criminal prosecution.

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Dutton, M.A., Kaltman, S., Goodman, L.A., Weinfurt, K., & Vankos, N. (2005). Patterns of intimate partner violence: Correlates and outcomes. *Violence and Victims*, 20 (5), 483-497.

Dutton, M.A., Green, B.L., Kaltman, S.I., Roesch, D.M., Zeffiro, T.A., & Krause, E.D. (in press).

Intimate partner violence, PTSD and adverse health outcomes. *Journal of Interpersonal Violence*.

El-Khoury, M., Dutton, M.A., Goodman, L. A., Belamaric, R., J., & Murphy, M. (2004). Ethnic differences in battered women's formal help-seeking strategies: A focus on health, mental health and spirituality. *Cultural Diversity & Ethnic Minority Psychology*, 10(4), 383-393.

Goodman, L.A., Dutton, M.A., Weinfurt, W., & Vankos, N. (2005). Women's resources and use of strategies as risk and protective factors for re-abuse over time, *Violence Against Women*, 11(3), 311-336.

Goodman, L. A., Dutton, M.A., Weinfurt, K., & Cook, S. (2003). The Intimate Partner Violence Strategies Index: Development and application. *Violence Against Women*.9(2), 163-186.

Murphy, Jane C. (2003). Engaging with the state: The growing reliance on lawyers and judges to protect battered women. *Journal of Gender, Social Policy & the Law*. 11 (2), 499-521.

Manuscripts under Review (*alphabetical order*)

Bell, M.E., Goodman, L.A., & Dutton, M.A. The dynamics of staying and leaving: Implications for battered women's emotional well-being and experiences of violence at the end of a year.

Krause, E.D., Kaltman, S., Goodman, L., Dutton, M.A. (2005). Role of distinct PTSD symptoms in intimate partner reabuse: A prospective study.

Krause, E.D., Kaltman, S., Goodman, L., Dutton, M.A. (2005). Longitudinal factor structure of posttraumatic stress symptoms related to intimate partner violence.

Krause, E.D., Kaltman, S., Goodman, L., Dutton, M.A. (2005). Coping and posttraumatic symptoms among survivors of domestic violence: Prospective study.

Manuscripts in Preparation

Bell, M.E., Goodman, L.A., Gonzalez-Eastep, D., & Dutton, M.A. Victim response to justice system interventions: The importance of supportive interactions.

Bennett-Cattaneo, L., Bell, M.E., Goodman, L.A., & Dutton, M.A. Predicting battered women's accuracy in assessing their risk of re-abuse.

Bennett Cattaneo, L., Goodman, L.A. & Dutton, M.A. Patterns of helpseeking over time among victims of IPV.

Dutton, M.A., et al. Predictors of battered women's threat appraisal.

Dutton, M.A., et al. Longitudinal trajectory of PTSD among battered women

Dutton, M.A., Goodman, L.A., & Kaltman, S. Longitudinal patterns of intimate partner violence

Dutton, M.A., Kaltman, S., & Green, B.L. The impact on battered women of media exposure to terrorist attacks.

Dutton, M.A., Kaltman, S., Goodman, L.A., Weinfurt, K. Looming vulnerability: The mental health impact of living with the threat of intimate partner violence.

Dutton, M. A., Fuerer, R., & Goodman, L. A.. Use of civil protection orders.

El-Khoury, M. & Dutton, M.A. Women's use of intimate partner violence: Prevalence and Motivation.

Kaltman, S., Dutton, M.A., and Goodman, L.A. Intimate partner violence, mental health, and occupational functioning

Krause, E.D., Dutton, M.A., Kaltman, S., Goodman, L.A. The role of avoidant coping strategies in posttraumatic stress symptoms among survivors of intimate partner violence: A prospective study.

Presentations at Professional Meetings (*alphabetical order*)

Anise, A., Kaltman, S., Krause, E., De Meo, K., & Dutton, M.A. (October, 2004). Effectiveness of hospital single triage question at identifying victims of intimate partner violence compared to a 6-item behaviorally anchored screen. Paper presented at the Annual Meeting of the Family Violence Prevention Fund. Boston, MA

Bell, M.E., Goodman, L.A., & Dutton, M.A. (2002, August). Understanding domestic violence victims' decision-making in the justice system: Predicting desire for a criminal prosecution. Poster presented at the annual meeting of the American Psychological Association, Chicago, IL

Bell, M.E., Goodman, L.A., & Dutton, M.A. (2003, October). The dynamics of staying and leaving: Implications for battered women's mental health, perceptions of social support and experiences of violence. Paper presented at the 19th Annual Meeting of the International Society for Traumatic Stress Studies, Chicago, IL.

- Bell, M.E., Goodman, L.A., & Dutton, M.A. (2003, July). Understanding domestic violence victims' decision-making in the justice system: Predicting desire for a criminal prosecution. Poster presented at the 9th Annual International Family Violence Research Conference, Portsmouth, NH.
- Bell, M.E., Goodman, L.A., & Dutton, M.A. (2003, July). The dynamics of staying and leaving: Implications for battered women's mental health, perceptions of social support and experiences of violence. Paper presented at the 9th Annual International Family Violence Research Conference, Portsmouth, NH.
- Bell, M.E., Goodman, L.A., & Dutton, M.A. (2004, April). The dynamics of staying and leaving: Implications for battered women. Paper presented at the Boston College Graduate Education Association's Annual Research Forum, Chestnut Hill, MA.
- Bell, M.E., Goodman, L.A., & Dutton, M.A. (2005, August). Longitudinal variations in battered women's relationship course and experiences of re-abuse. Paper presentation at the 11th Annual International Family Violence Research Conference, Portsmouth, NH.
- Bell, M.E., Goodman, L.A., & Dutton, M.A. (2005, August). The dynamics of staying and leaving: Implications for battered women. Poster presentation at the annual meeting of the American Psychological Association, Washington, DC.
- Bell, M.E., Goodman, L.A., Gonzalez-Eastep, D., & Dutton, M.A. (2003, July). The court system as a tool for victim empowerment. Poster presented at the 9th Annual International Family Violence Research Conference, Portsmouth, NH.
- Dutton, M.A., Kaltman, S. Krause, E., & Green, B. (November, 2005). Intimate partner violence and physical health risk behaviors. Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies. Toronto.
- Dutton, M.A., Goodman, L.A., & Kaltman, S. (July, 2003). Longitudinal patterns of intimate partner violence. In M.A. Dutton (Chair), *Battered Women Seeking Help: One Year*

- Later. Symposium conducted at the 8th International Family Violence Conference, Portsmouth, NH..
- Dutton, M.A., Goodman, L.A., & Kaltman, S.(July, 2005). Determinants and consequences of battered women's threat appraisal. Paper presented at the International Family Violence Conference, Portsmouth, NH.
- Dutton, M.A., Goodman, L.A., Weinfurt, K., Vankos, N., & Kaltman, N. (October, 2003). The social context of battered women's threat appraisal. Paper presented at the International Society for Traumatic Stress Studies, Chicago, IL.
- Dutton, M.A., Kaltman, S., & Goodman, L.A. (2002). Configuration of types of IPV. Presented at the 18th Annual Meeting of the International Society for Traumatic Stress Studies, Baltimore, MD.
- Dutton, M.A., Kaltman, S., Goodman, L.A., Weinfurt, K. (October, 2003). Looming vulnerability: The mental health impact of living with the threat of intimate partner violence. Paper presented at the 19th Annual Meeting of the International Society for Traumatic Stress Studies. Chicago, IL.
- Dutton, M.A., Kaltman, S., Anise, A., & De Meo, K. (November, 2004). Mental health impact of intimate partner violence threat appraisal. Paper presented at the Annual Meeting of the American Public Health Association, Washington, DC.
- El-Khoury, M., Anise, A., Kaltman, S., De Meo, K., & Dutton, M.A. (November, 2004). Predictors of battered women's use of intimate partner violence. Paper presented at the Annual Meeting of the American Public Health Association, Washington, DC.
- Goodman, L.A., Dutton, M.A., & Bell, M.E. (December, 2001). Patterns of battered women's use of strategies. Paper presented at the 17th Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.

- Goodman, L.A., Dutton, M.A., & Bell, M.E. (July, 2001). Women's Intimate Partner Violence Strategy Index: Development and uses. Paper presented at the 7th Annual International Family Violence Research Conference, Portsmouth, NH.
- Kaltman, S., Krause, E., & Dutton, M.A. (November, 2005). Health behavior, PTSD, and intimate partner violence. Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies. Toronto.
- Kaltman, S., & Dutton, M.A. (November, 2004). PTSD and depression: Impact on strategic responses to violence in battered women. Paper presented at the Annual Meeting of the American Public Health Association, Washington, DC.
- Kaltman, S., & Dutton, M.A. (November, 2004). Intimate partner violence, mental health, and occupational functioning. Poster presented at the 20th Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.
- Kaltman, S., & Dutton, M.A. (November, 2004). Low-SES African American battered women: Mental health and coping. Poster presented at the 20th Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.
- Kaltman, S., Dutton, M.A., and Goodman, L. (October, 2003). Emotion-focused coping in battered women: Correlates and outcomes. Paper presented at the 19th Annual Meeting of the International Society for Traumatic Stress Studies. Chicago, IL.
- Krause, E. Kaltman, S., Goodman, L.A., & Dutton, M.A. (November, 2005). Longitudinal factor structure of PTSD in intimate partner violence. Poster presented at the Annual Meeting of the International Society for Traumatic Stress Studies. Toronto.
- Krause, E.D. & Dutton, M.A. (November, 2004). Role of distinct PTSD symptoms in IPV revictimization: A prospective study. Poster presented at the 20th Annual Meeting of the International Society for Traumatic Stress Studies, New Orleans, LA.
- Murphy, M., Dutton, M.A., Kaltman, S., Somberg, R., & Goodman, L. (2002). PTSD and obstacles for battered women to disclose to a health care provider. Presented at the

18th Annual Meeting of the International Society for Traumatic Stress Studies, Baltimore, MD.

Dissertations and Master's Theses (alphabetical order)

Bauman, Emily

American University , Department of Psychology

Dissertation

Patterns and correlates of emotion-focused and problem-focused coping in battered women over time.

Bauman, Emily

American University , Department of Psychology

Master's Thesis

Problem focused vs. emotion-focused coping

Belamaric, Robin

George Washington University, Department of Psychology

Doctoral Dissertation

The role of family structure in battered women's violence victimization

Bell, Margaret

Boston College, Department of Education

Dissertation

The dynamics of staying and leaving: Implications for battered women's mental health and experiences of violence (Ph.D.)

El-Khoury, Mai

George Washington University, Department of Psychology

Dissertation

Women's use of violence: Prevalence and reported motivations of women's use of violence

Engel, Lisa

George Washington University, Department of Psychology

Dissertation

Cross-sectional study: Relationship between PTSD severity, subjective threat appraisal and coping (Ph.D.)

Somberg, Rachel

George Washington University, Department of Psychology

Master's Thesis

Cross-sectional study: Predicting PTSD/depression comorbidity from childhood abuse, social context factors, IPV characteristics (current violence, prior experiences, threat appraisal, substance abuse, age, race, income, social support)

Somberg, Rachel

George Washington University, Department of Psychology

Dissertation

Predicting longitudinal patterns of comorbidity of PTSD/depression

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