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FINAL TECHNICAL REPORT:

The Effectiveness of Coordinated Outreach in Intimate Partner Violence Cases: A Randomized, Longitudinal Design

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Abstract

Intimate partner violence (IPV) poses an extremely costly problem to the individual, society, and criminal justice system. Effective responses to IPV require comprehensive, well-coordinated policies and protocols that maximize the legal sanctions and available community resources. Prosecution decisions and criminal justice outcomes are influenced by victim support for official action. The current study tested the prediction that early coordinated victim outreach would improve criminal justice outcomes as well as increase victim safety and empowerment. In collaboration with research, criminal justice, and community-based partners, this project employed a randomized control design to evaluate an innovative outreach program for racially and ethnically diverse IPV victims whose cases have come to the attention of the criminal justice system. Participants, who were randomly selected to receive outreach or treatment-as-usual, were interviewed at three time points: after an incident of IPV was reported to the police (T1), 6 months after T1, and 12 months after T1. The study addressed three primary goals. First, we evaluated the effectiveness of a coordinated, community-based outreach program in improving criminal justice and victim safety and empowerment outcomes for IPV victims using a longitudinal, randomized control design. Second, we identified victim and case characteristics that moderated outcomes. Third, we evaluated the influence of spatial characteristics on criminal justice outcomes.

Between 5 December 2007 and 14 July 2008, 236 women in Denver City/County were enrolled into the study within a median of 26 days from an incident of IPV report to law enforcement. Victim-focused outreach had an impact on decreasing women's reluctance to work with prosecutors and increasing women's likelihood of being encouraged to take part in the prosecution of their abusers. These findings also indicated that outreach might be particularly

important for IPV survivors marginalized by race/ethnicity, socio-economic status as well as for those survivors still living with their abusers after the target IPV incident (from which they were recruited for study participation). In addition, compared to the treatment-as-usual condition, women who received outreach reported decreased PTSD symptom severity, depression, and fear one year later. Although there were no effects of outreach on revictimization or social support levels, women randomly assigned to outreach reported greater readiness to leave the abuser than women assigned to treatment-as-usual. Further, the use of a geographic information system (GIS) revealed spatial patterns to key variables, such as aggression and posttraumatic responses. Women who anticipated problems going to court due to travel-related barriers (e.g., problems parking, taking the bus, etc.) were less likely to go to court when asked to go. Thus, this research highlights potential ways to think about and use spatial data in victim-focused research. Finally, research, policy, and practice implications of the study are discussed.

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Executive Summary

Intimate partner violence (IPV) poses an extremely costly problem to the criminal justice system. Despite the deleterious psychological and safety outcomes associated with IPV, limited information on effective interventions is available to criminal justice system-based (e.g., prosecuting attorney and law enforcement offices) and community-based (e.g., shelters and legal advocacy programs) agencies that respond to IPV. Further, existing studies have been generally limited to women already using shelters or medical services, many of whom tend to be disproportionately economically marginalized.

Given the complexity of IPV, researchers and practitioners have called for a community coordinated response (CCR) to advocate more effectively for and reach a broader base of IPV victims. A CCR involves collaboration between community- and criminal justice system-based agencies to locally coordinate IPV intervention and prevention efforts. CCRs recognize that criminal justice system-based advocates are often the first to be in contact with victims after police-reported IPV; however, services that address victim needs beyond the legal case are situated *in* the community (e.g., shelter services, legal advocacy in ending relationships). Thus, it is critical to connect women with community-based advocates working outside the criminal justice system. For example, a CCR could involve criminal justice system-based victim advocates, whose primary focus is the legal case, referring victims to relevant community-based agencies to address victims' needs outside of the legal case (e.g., locating housing).

To date, most CCR programs have been geared more toward responding to abusers than victims. Victim-centered CCRs confront important constraints imposed by the criminal justice system that are critically important to victim service provision. For example, victim advocates in the criminal justice system (e.g., in police departments and/or prosecuting attorney offices) are

subject to disclosure in legal cases; therefore, criminal justice system-based advocates cannot offer women confidentiality. Because community-based agencies can offer confidential support to victims as well as address victim needs outside the legal case, CCRs that connect victims with community-based advocates may be particularly beneficial. Thus, research on the impact of CCRs generally is urgently needed as well as research that specifically examines the relative impact of criminal justice system- versus community-based advocacy.

The current study compared the impact of community-based outreach (Outreach) and criminal justice system-based referral (Referral) in the same urban jurisdiction (Denver Colorado) on criminal justice outcomes as well as women's psychological distress and safety. Both Outreach and Referral approaches involved initial contact by a criminal justice system-based victim advocate to assess victim needs; and discussion of new IPV cases by an interdisciplinary victim service team comprised of criminal justice system and community-based victim service professionals. The interdisciplinary victim service team's primary goal was to coordinate responses to IPV victims across law enforcement, prosecution, and community-based service agencies in order to improve victim safety and well-being, as well as improve criminal justice outcomes (e.g., offender containment strategies, efficient case filings).

For the Outreach condition, the interdisciplinary victim service team identified a specific community-based agency to initiate phone outreach to each victim based on the victim's unique case and needs. Importantly, outreach by community-based agencies offered women a confidential means of learning about and accessing support and services from an agency that could provide relevant services, while not requiring women to search out services in the aftermath of IPV. For the Referral condition, a criminal justice system-based advocate (from the prosecuting attorney's office or police department) contacted women to make referrals to

community-based agencies, with which women could make contact if they elected to do so.

Participants were assessed by a separate research team as close to the IPV incident as possible (Time 1; T1) and then 6- (T2) and 12- (T3) months later. Multiple outcomes were measured, including criminal justice e.g., case disposition), victim psychological distress (i.e., PTSD, depression, and fear) and victim safety (i.e., revictimization, readiness to leave the abusive relationship), while taking into account potential moderators (socio-economic status, living with the offender, perceptions of physical or economic dependence on the offender, and ethnic minority group status). Because the Outreach condition was designed to connect women with relevant community-based victim service agencies that could provide confidential services, our primary predictions were that the Outreach (compared to Referral) condition would be associated with more positive criminal justice outcomes as well as greater decreases in common victim IPV reactions (PTSD, depression, and fear). Further, we predicted that Outreach (relative to Referral) would also lead to better victim safety outcomes, including greater readiness to leave the abusive relationship and decreases in revictimization. In addition to examining the impact of Outreach and Referral conditions on criminal justice and victim well-being outcomes, the current study also used a Geographic Information System (GIS) to evaluate the influence of spatial characteristics on criminal justice outcomes following police-reported IPV.

Method

Participants. The participants were a diverse group of 236 women with a police-reported domestic violence call (Age *Mean* = 33.8, *SD* = 11.1) who described their racial/ethnic backgrounds as: 33% White/Caucasian, 29% Black or African-American, 2% Asian/Asian American or Pacific Islander, 14% American Indian or Alaskan Native, and 42% Hispanic/Latina. We used spatial data to explore the representativeness of the sample. Using

geo-coded addresses, we compared where participants reported living at the time of the incident to the addresses of all IPV incidents reported across the county during the recruitment period. Participants reported addresses that appear to represent the spatial locations of IPV incident reports and, therefore, spatially-relevant demographic variables (e.g., ethnicity, income).

Measures. Several variables were used to measure criminal justice outcomes, including case disposition; whether or not women were asked to go, as well as went to, court; and women's ratings of their engagement with prosecution. Several psychological responses to IPV were assessed using well-validated and reliable measures, such as posttraumatic stress disorder (PTSD) and depression symptom severity as well as fear. Victim safety was assessed in terms of the occurrence of additional IPV incidents during the study period. In addition, women's readiness to leave the relationships with the offender was assessed as well as service utilization and social support. In addition to outcome measures, potential moderators were considered, including socioeconomic status, perceptions of dependence on the offender, and ethnicity. Finally, women were asked to provide address information in order to examine study variables spatially.

CCR Intervention Procedure. Prior to daily interdisciplinary team meetings, the team leader applied an algorithm to randomly assign all domestic violence women victims identified in police reports to Outreach or Referral conditions. Also prior to the team meetings, a system-based advocate attempted initial contact with victims to assess their needs. Importantly, victims did not receive the Outreach or Referral interventions if they 1.) could not be reached within 3 business days by the system-based advocate (as this meant the system-based advocate could not assess their needs to share with the interdisciplinary team); or 2.) told the system-based advocate that they wanted no further contact.

At the interdisciplinary team meeting, the team conducted empirically-guided risk assessments on a case-by-case basis to identify women who appeared to be at grave risk for imminent serious harm or fatality. Victims who the team determined to be at grave safety risk were not eligible for the study and automatically referred for community-based outreach. The interdisciplinary team was blind to the Outreach/Referral condition assignment until after the risk assessment to assure that risk was not evaluated differently depending on condition assignment.

Once the risk assessment was completed, the condition assignment was revealed to the interdisciplinary team. Among women randomly assigned to the Outreach condition, the interdisciplinary team chose the most appropriate community-based agency to initiate response to each victim's needs. The lead community-based agency was then responsible for making phone outreach to the victim to offer her services and to help her connect with relevant services. For women assigned to the Referral condition, a system-based victim advocate called women to make referrals to community-based agencies; women in the Referral condition could then contact community-based agencies themselves if they so desired.

Research Procedure. The research team retrieved publicly-accessible police incident reports from the Denver Police Department several times per week. Within a day of retrieving these incident reports, the research team sent lead letters inviting women to participate in a Women's Health Study, regardless of how the case was proceeding in terms of the CCR Intervention Procedure. Approximately three days after the lead letter was mailed, research staff initiated phone calls to invite potential participants. Recruiting materials (lead letters, phone scripts) did *not* mention IPV in order to decrease safety risks to potential participants. During the initial phone contact, potential participants were invited to attend a 3-hour interview. Women who indicated that they would have to take public transportation to the interview were offered

cab rides.

Participants were greeted by a female interviewer (a graduate-level interviewer and/or the PI) who was blind to the intervention condition. During the consent process, women were told that their names had been identified from police reports. Participants were informed about the scope of the study as well as their rights as participants. Participants completed a "consent quiz" designed to assess understanding of the consent information. Following consent procedures, participants completed the interview and questionnaires. At the end of the session, participants were asked to complete questions to monitor responses to study procedures; and debriefed.

Approximately three weeks prior to follow-up interview due dates, a lead letter was sent letting women know that the researchers would be calling to schedule a follow-up interview. Approximately two weeks prior to T2 and T3 interview dates, we began calling women to schedule the T2/T3 interview. When women arrived for the follow-up interviews, we reviewed consent information and re-administered the consent quiz. Participants then completed the interview and questionnaires after the consent review procedures. At the end of each interview, women were compensated for their time ($50 at T1, $55 at T2, and $60 for T3) and debriefed. At the end of each interview, women were offered a newsletter that provided referrals to community agencies dealing with health and violence issues.

Results

This study was designed to compare the two experimentally-manipulated conditions (Outreach versus Referral conditions). Importantly, all available evidence pointed to the successful randomization of women to Outreach and Referral conditions: these groups did not differ from one another on key demographic or case characteristics. Because the research team attempted to contact all women with police-reported IPV in a procedure that was separate from

the CCR intervention procedure, two additional groups of women were interviewed. These included women who consented to research interviews when contacted by the research team, but who: 1.) were not reached by system-based advocates after three attempts during the CCR intervention procedure; or 2.) declined further contact when reached by system-based advocates during the CCR intervention procedure. Women in these naturally-occurring groups were equivalent to women in the Outreach and Referral conditions on all demographic and case variables examined, with one exception: women who declined contact were significantly more likely to live with their partner at the time of the first interview (T1) than women in the other three groups.

Criminal Justice Outcomes. Victim-focused contact (Outreach and Referral conditions) was linked to better outcomes than lack of contact (women who declined contact or were never reached by victim advocates at the start of the CCR procedure, but who were reached by the research team for participation in research interviews). Women were significantly more likely to engage fully with prosecutors (versus no engagement) when they were in the Outreach or Referral groups compared to women who declined or were not reached by system based advocates. Perceptions of physical (but not economic) dependence on the abuser were associated with decreases in likelihood of full engagement. Socio-economic status did not moderate engagement effects; however, higher SES was associated with greater likelihood of engagement.

We also examined the likelihood that women were asked to go to court; and went to court if asked. Women in the Outreach or Referral conditions reported a higher likelihood of being asked to go to court compared to women who declined contact or were never reached by victim advocates at the start of the CCR procedure. Looking at whether women went to court when asked, the data revealed a modest and encouraging trend for the effect of Outreach. In particular,

analyses suggest that women assigned to the Outreach condition were more likely to go to court than women in the Referral condition, with an effect size of d=.40. Among racial/ethnic minority women, those who were randomly assigned to the Outreach group were significantly more likely to go to court than those assigned to the Referral condition (78% versus 53% respectively).

To evaluate the impact of outreach on case disposition, we examined both continuous (number of guilty verdicts) and categorical (no charges filed versus dismissed, etc.) measures of case disposition. The groups appeared equally likely to have their cases end with no charges filed/refused; dismissal; or a verdict entered. However, several factors did have an effect on outcome that should be noted. Women who identified as ethnic minorities and women with higher socio-economic status had greater likelihood of having a verdict entered (relative to having cases dismissed or not filed). This finding is consistent with the relationship observed between socio-economic status and likelihood that women went to court if asked. In addition, the data suggest that living with the abuser at the time of the incident increased the likelihood that cases were dismissed relative to having a verdict entered.

Because living with the abuser emerged in these analyses, we looked more closely at the effects of outreach for women who continued to live with the abuser at T1 (approximately one month from the incident). Among these women, a striking effect of outreach emerged: 100% of women randomly assigned to Outreach had verdicts entered in their cases versus only 33% of women randomly assigned to the Referral condition. In fact, 56% of women in the Referral condition had their cases dismissed and 11% had either no charges filed or charges refused. This finding, then, points to a subgroup of women for whom outreach may be particularly helpful: those who continue to cohabitate with their abuser in the month after the reported incident.

Psychological Distress. Compared to women in the Referral condition, women in the

community-based Outreach condition reported greater decreases in both PTSD and depressive symptom severity, and fear, one year later. In fact, women in the Referral condition reported *increases* in symptoms from T2 to T3, suggesting that community outreach may have important influences long after the abuse occurs. This finding emphasizes the importance of research that examines medium- to long-term outcomes. In addition, these findings point to the importance of future research on the role that community-based victim advocates can play in addressing distress following IPV in addition to other more frequently studied responders, such as therapists and medical providers.

Importantly, moderator analyses revealed that community-based Outreach was almost 3 times more effective for ethnic minority women in decreasing fear compared to White women. In fact, while moderate to large decreases in fear were observed among ethnic minority women, only small decreases were observed among White women. Community-based Outreach was less effective for women who perceived greater physical dependence on the offender relative to their peers; however, economic dependence on the offender did not moderate the impact of the Outreach condition.

Revictimization. At T2 or T3, women's exposure to additional instances of aggression by the target offender and/or a new partner was all-too-common. Even though this sample was recruited from incident reports indicating *non*-sexual IPV, nearly one-third of women in the sample reported that the target offender engaged in at least one sexually aggressive tactic in the year following the T1 interview. Thus, these data demonstrate the importance of assessing sexual abuse among women exposed to non-sexual IPV. For almost one-third of the women, conflicts with the offender continued to be physically aggressive. Roughly one-quarter of women reported that a new partner engaged in at least one psychologically aggressive tactic. In addition, 7-15%

of women reported physically aggressive or sexually aggressive behaviors by new partners. Thus, women continued to be at risk over the follow-up year.

Spatial Findings. We used spatial analyses in two ways for the current study: 1.) to examine the spatial characteristics of key study variables; and 2.) to examine transportation barriers to going to court among those women asked to go. Turning first to the examination of spatial characteristics of key variables, we discovered that women's reports about the number of psychologically aggressive tactics used against them during the target incident were autocorrelated. This spatial pattern suggests that some aspect of psychological aggression is rooted in communities, raising questions about the extent to which neighbors who share such psychologically aggressive behaviors/attitudes fail to intervene or even perhaps facilitate these behaviors in others, particularly given that behaviors such as shouting could be heard by others living nearby. In addition to global patterns in the data, we found several important regional or neighborhood spatial patterns. For example, social support, depression and PTSD symptom severity as well as fear data showed spatial patterns that suggested variation based on where women lived.

In terms of transportation barriers to going to court, we found that women's perception of getting to court strongly predicted whether they attended or not. Although we constructed detailed GIS models accumulating the friction of either driving or public transportation, the friction values were unrelated to court attendance. However, when we tested a model that included several spatially-relevant variables (Group; African American and Latina ethnicity; SES; primary transportation mode; number of transportation problems anticipated at T1; and friction values), we discovered that women who relied on public transportation and women who anticipated more transportation problems at T1 were less likely to go to court. Interestingly,

women's perceptions of transportation problems were more strongly related to whether or not they went to court than the friction models that quantified time and distance. This may be because perceptions matter more to decision-making or because the anticipated problem list took into account factors that could not be model based on time and distance, such as the additional challenge of coordinating travel for children or fear of making one's way downtown.

Responses to Research Participation. At the end of each interview, we asked women to report on their perceptions of the research process using the Response to Research Participation Questionnaire. At each time point, women rated the positive scales in such a way to indicate agreement (significantly greater than the neutral point on the scale) and negative scales to indicate disagreement (significantly less than the neutral point on the scale). We next compared the personal benefits women reported to the two negative scales (drawbacks to participating in the study, such as procedures taking too long; and emotional reactions, such as unexpected negative feelings). In both comparisons across all three time points, women rated the personal benefits as significantly greater than the costs. The effect sizes were large. Thus, we are confident that this research was conducted within a positive and stable benefit-to-cost ratio.

These data are particularly notable because compared to participants in our other studies where we have examined responses to participation, women in the current study had more recent violence exposure; and knew fewer details about what to expect in the interview when they scheduled the interview. In fact, when women arrived for the first session, they knew only that they were invited to participate in a study on "Women's Health." During the consent process, interviewers informed women that their names were accessed through police reports. While such information could have been negatively received by women (e.g., perceived as an invasion of privacy), these data suggest that study procedures addressed women's concerns in such a way

that they left the first session feeling positively. Women's responses at T2 and T3 demonstrate our ability to maintain a positive benefit-to-cost ratio over the course of this longitudinal study. Further, women's responses to study procedures (positive or negative) at T1 were unrelated to their decisions to return for T2 or T3 interviews. Taken together, these findings provide evidence that research can be conducted within a stable benefit-to-cost ratio among women recently exposed to IPV; and that perceptions of drawbacks/emotional reactions related to participation are unrelated to retention at later time points.

Conclusions. This is one of the first studies to examine community-based outreach in the context of an interdisciplinary community coordinated response to police-reported IPV. The findings suggest that community-based outreach by victim advocates results in decreased distress levels and greater readiness to leave abusive relationships relative to the system-based referrals. In addition, the current study provides evidence of positive effects of victim-focused services on criminal legal system outcomes. Thus, the current findings are directly relevant to policy makers and practitioners seeking to develop and adapt victim-focused services following IPV. Further, this project offers a template for the successful collaboration of research, system-based, and community-based partners to implement a randomized control design.

Introduction

This project tested the effectiveness of an interdisciplinary victim outreach program in improving criminal justice outcomes as well as victim well-being among women exposed to intimate partner violence (IPV) using a randomized control, longitudinal design. Specifically, Denver's Triage Project coordinates responses to IPV victims in Denver City and County across law enforcement, prosecution, and system- and community-based service agencies. The Triage Project's multi-disciplinary Review Team (including representatives from law enforcement, criminal justice system, and community-based agencies) meets daily to facilitate comprehensive coordination of information to address victim safety issues, offender containment strategies, and efficient case filings. Several aspects of the target program, implemented by the Review Team of the Denver Triage Project, make it particularly timely and important to evaluate. First, this program involves the coordination of criminal justice and community-based outreach when cases enter the criminal justice system, thus facilitating outreach to victims by community-based agencies within days of an IPV incident reported to law enforcement. Second, the outreach agency is chosen based on victim needs, with the input of the interdisciplinary Review Team. Third, outreach is provided by community-based victim advocates who can offer clients greater confidentiality than system-based advocates. Fourth, victims are not required to initiate contact to seek out services at a time when they may be in crisis and least able to make such initiation.

Project goals were threefold. First, we sought to evaluate the effectiveness of a coordinated, community-based outreach program in improving criminal justice and victim well-being outcomes for IPV victims using a longitudinal, randomized control design. Second, we wanted to identify victim and case characteristics that moderate program effects on outcomes. Third, we evaluated the influence of spatial characteristics on women's decisions to participate in

official action as well as spatial characteristics of incidents and well-being factors. Thus, the project described in this report is one of the most comprehensive assessments in the area of IPV research. More specifically, the multi-methods and inter-disciplinary research project described in this report includes randomized assignment, longitudinal data collection, and spatial modeling to evaluate a comprehensive triage program that includes the criminal justice system and community-based agencies.

Overview of Relevant Literature

For the purposes of this study, the term IPV describes abusive, violent, and threatening behaviors (including stalking) posed by a current or former intimate partner (e.g., ex-spouse, spouse, lover, boyfriend, date, etc.). Although people typically characterize IPV as non-sexual physical abuse, IPV also includes sexual and verbal/emotional abuse (e.g., lethal threats to the victim and her loved ones) as well as destruction to pets and property (Belknap & Potter, 2006). Given that IPV largely involves men perpetrating against women, this study focuses on women victims and survivors (e.g., Belknap & Melton, 2005; Dasgupta, 2001; Tjaden & Thoennes, 2000; Warner, 2010).

IPV poses an urgent criminal justice and public health problem in the United States. According to the Bureau of Justice Statistics, 691,710 nonfatal and 1,247 fatal victimizations were committed by intimate partners in the U.S. in 2001 (Rennison, 2003). An extensive national survey of Canadian women found that about 15% of women reported abuse by a current intimate partner and 45% reported abuse by a previous intimate partner (Johnson, 1995). In addition to high prevalence rates, IPV is associated with an extensive range of deleterious physical, mental, and economic consequences for victims (see, Browne, Salomon, & Bassuck, 1999; Johnson & Bunge, 2001; McCaw et al., 2007; Stover, 2005). In 1995, IPV against women cost in excess of

an estimated $5.8 billion, including costs of medical and mental health care and lost productivity (CDC, 2003). IPV remains an extremely costly problem to the individual, society, and legal system.

Developing effective responses to IPV is an extremely complex task due, in part, to the number and complexity of systems involved (e.g., law enforcement, attorneys, victim advocates). Thus, effective responses require comprehensive, well-coordinated policies and protocols that maximize the legal sanctions and community resources available to hold batterers accountable and ensure victims that their safety is a priority (e.g., Shepard, 1999). To date, most of the existing studies assessing community-coordinated responses to IPV do not employ randomized trials, are not longitudinal, do not assess a coordinated response across system- and community-based agencies, and do not include a spatial analysis. The current study described in this report included a longitudinal randomized trial, assessed an extremely comprehensive and carefully designed community-coordinated response effort, and included spatial analysis.

Effectiveness of IPV Victim Outreach/Advocacy Programs. A growing research literature points to the promise of victim outreach/advocacy programs following IPV that originate from multiple settings (e.g., domestic violence shelters, emergency rooms). At the forefront of this research literature is work by Cris Sullivan and Deborah Bybee, who examined community-based advocacy programs for IPV women who sought services at domestic violence shelters. In the original reports on the program, Sullivan and Bybee (1999) found that women recruited from a domestic violence shelter, randomly assigned to short-term advocacy services (the intervention), experienced less IPV two years later compared to a control group. Although women in the control and intervention groups did not differ in abuse experienced 3-years post-intervention, the women who received the randomly-assigned advocacy intervention reported

better quality of life and higher levels of social support than the women in the control group (Bybee & Sullivan, 2005). Analyses of these same data found that women in the intervention group were more successful than women in the control group in obtaining desired community resources and increasing their social support, which enhanced their overall quality of life (Bybee & Sullivan, 2002). Moreover, the improved well-being of the women in the intervention group also translated into less abuse at a 2-year follow-up, compared to women in the control group (Bybee & Sullivan, 2002).

Also among women recruited through domestic violence shelters, *intensive* advocacy for women resulted in less physical abuse 1-2 years later; increased safety behaviors; and increased quality of life. However, intensive advocacy did not have an impact on depression or psychological distress levels (Ramsay et al., 2009). Significantly, volunteer-based advocacy services for victims in police-reported IPV cases found that the police were more likely to "activate" advocacy/intervention for some women (e.g., those who were pregnant, married to their abusers, Latina or Asian American, had visible injuries) than for others; activation rates varied by the police precincts (Kernic & Bonomi, 2007). In addition to the above studies, some of which used randomized-control designs, several other studies have documented links between cooperative efforts in criminal justice system responses to IPV and positive outcomes, including decreased recidivism and increased arrests of perpetrators (e.g., Butzer et al., 1996; Jones & Belknap, 1999; Kramer & Black, 1998; Shepard, 1999). However, rigorous independent, randomized-control designs have been lacking (Chalk & King, 1998; Shepard, 1999).

Research on IPV outreach programs within medical institutions appear to be more abundant than studies on IPV outreach programs originating from other settings, including criminal justice settings. For example, improved screening for IPV and on-site IPV victim

advocacy in urban emergency departments resulted in patients (i.e., IPV victims) who cooperated more with the emergency department personnel and who were more likely to follow-up with a community-based agency where victim advocates worked (Krasnoff & Moscati, 2002). In a primary healthcare clinic for the uninsured, IPV victims were randomly assigned to an intervention group (on-site counseling sessions and 6 phone counseling sessions over 3 months) or a control group (brochures, lists of community resources, and monthly phone calls to confirm contact information; Gillum, Sun, & Woods, 2009). The women in the intervention group engaged in significantly more "safety-promoting behaviors" (p. 1259) than the women in the control group (Gillum, Sun, & Woods, 2009). Yet another study found that IPV victims in emergency departments who had outreach counseling and resource referrals on safety and safety planning felt safer after this intervention (Kendall et al., 2009).

Though the extant literature offers promising support for several forms of outreach, we are unaware of any evaluations of programs that involve large, interdisciplinary teams that collaborate to organize outreach by community-based agencies, such as the Denver Triage Program. Further, many of the evaluations available in the literature comprise samples limited to IPV survivors using battered women's shelters or emergency hospital personnel/services; arguably, these women are already connected to some degree to community-based care (by the nature of the recruitment strategy). Further, women who access emergency department and/or shelter services are not representative of all IPV survivors, many of whom never use a hospital, and even fewer of whom use shelter services. With mandatory arrest policies in place across the U.S. (and in Denver, Colorado), a sample consisting of cases where the police were called (by the victim, a witness, neighbor, etc.) is far more likely to be representative of IPV survivors than studies focusing on women who elect to go to hospital emergency rooms or battered women's

shelters. Thus, in addition to evaluating a community-based outreach program that is informed by an interdisciplinary team, the current study's sample is far more likely to be representative of IPV cases than the majority of the existing studies assessing community outreach.

Randomized control trials are ideal to assess the impact of a community-based, interdisciplinary, collaborative program; though can be difficulty to implement. Randomized control studies can provide empirical evidence about a program's success and help to fine-tune programs by answering questions about what works best for whom under what conditions. Indeed, many factors may moderate a program's effectiveness, such as victim demographics (e.g., Kingsnorth & MacIntosh, 2004) and individualizing responses to each woman's needs (e.g., Davies, Lyon, & Monti-Catiania, 1998).

Overview of Intervention Rationale. Drawing on the empirical literature, we tested the impact of outreach on several key variables across two domains: criminal justice (e.g., case disposition, women's reluctance/cooperation) and women's well-being and empowerment (e.g., psychological symptoms, fear, increased social support). We now turn to reviewing relevant literature on the key variables examined in this project.

Victim Social and Demographic Characteristics. Victim support for official action is critical to both prosecution decisions and criminal justice outcomes (e.g., Davis, Smith & Taylor, 2003). Thus, understanding how and why victims decide to support (or not support) official action is a central question. Importantly, the victims' social context affects decisions to support official action such that women's decisions are "rationally chosen in the context of their current lives" (Hoyle & Sanders, 2000; p. 21). In short, victims' decisions to support official action involve an extremely complex process of assessing costs and benefits which may vary by groups (e.g., Kingsnorth & Macintosh, 2004). For example, African American women and women who

cohabit with offenders are less likely to support prosecution (Kingsnorth & MacIntosh, 2004). African American women and Latina IPV victims also differed in terms of their likelihood to contact the police, and this was moderated by the seriousness of the abuse (Davies, Block, & Campbell, 2007). Still other research has documented that IPV victims still living with their abusers at the time of the IPV arrest reported lower levels of support from prosecutors, protection order advocates, victim advocates, and shelter workers (Belknap et al., 2009). In addition, the type and degree of an IPV victim's dependence on her abuser may influence her choices. For example, if a woman's current life context involves economic or emotional dependence on the offender, then ambivalence or opposition to prosecution "are often rational choices" (Hoyle & Sanders, 2000, p. 29). Thus, in the design for the current study we sought to examine whether effectiveness of the outreach program was moderated by demographic variables, such as ethnicity and cohabitation status.

Historically, victim "cooperation" was examined with little awareness of ways that IPV victims are blamed and/or pathologized when they "fail" to cooperate with law enforcement, prosecutors, victim advocates, and so on. Much like efforts to understand "why women stay" in violent relationships, efforts to understand victim cooperation can suffer from failing to appreciate the serious psycho-social consequences of abuse by an intimate, trusted partner, or the reality of lethal threats coming to fruition in cases where IPV victims no longer trust their (current or former) intimate partners, but rather are terrified by them. A growing body of literature suggests that dependence on a perpetrator will be associated with mental health (e.g., depression and posttraumatic stress disorder) and information processing changes (e.g., problems with memory and attention) that can be viewed as efforts to adapt in the face of abuse by a trusted and needed other (e.g., DePrince & Freyd, 2001, 2004; Freyd, 1996). When considering

victims' dependency on offenders and associated changes in well-being (e.g., increased depression or confusion), it is reasonable to expect that many women choose not to support official action. Because efforts to increase victims' support for prosecution must address the victims' social context and seek to provide resources that can decrease dependence on the offender, we tested whether outreach was associated with increases in social support.

Victim Psychological Factors. Several psychological factors may affect support of official action. Many IPV victims experience feelings that contribute to reticence to support prosecution, such as embarrassment, fear of the legal process, feelings of shame, and a sense of failure in their relationships (Fischer & Rose, 1995). Indeed, DePrince and colleagues found that IPV victims reported greater fear, betrayal, and shame than victims of other types of crime (DePrince et al., 2007). Belknap and colleagues found that IPV victims ranked the police, prosecutors, and other legal advisors as the least supportive individuals included in a long list of institutional and social supporters (Belknap et al., 2009). Fear appeared to be a particularly important factor in other studies, as well. In one study of women's barriers to attending their own IPV victimization court cases, half (51%) of the women reported that their biggest barrier was overcoming the fear of their abusive intimate partners (Belknap & Sullivan, 2001). Other research has demonstrated that fear decreases women's cooperation with prosecution (Fischer & Rose, 1995; Goodman et al., 1999). Taken together, this evidence points to the importance of victim outreach to decrease negative feelings and fears that otherwise impede victims' trust and enhance victims' safety, in order that may less reluctantly and more safely "cooperate" with the police, victim advocates, prosecutors, and others.

To better understand victims' psychosocial well-being and likelihood of working with professionals who want to advocate for them (e.g., prosecutors, physicians, victim advocates), it

is useful to examine the effects of the anxiety associated with IPV victimization. More specifically, in the face of chronic threat, victims frequently oscillate between extreme states of anxiety and avoidance (see Herman, 1992). When anxious, victims monitor for threat and are on alert (Herman, 1992). When avoidant, victims may appear unaffected or "spaced out" and are likely to avoid reminders of the violence or cues that bring back painful emotions and anxiety. The criminal justice system presents victims with relentless cues to the IPV event, often explicitly requiring victims to remember (e.g., when testifying or answering police questions). Thus, the oscillation of anxiety-avoidance responses to IPV is likely to affect victims' interactions (or avoidance thereof) with the justice system. Further, IPV-exposure is associated with avoidance of trauma-related cues and cognitive effects (e.g., concentration problems, memory disruption; DePrince, Weinzierl, & Combs, 2009) that may contribute to victims' actual (or perceived) ability and/or willingness to participate in the criminal justice system.

Aspects of this anxiety-avoidance pattern are captured by some mental health diagnoses, such as posttraumatic stress disorder (PTSD) and depression (e.g., Herman, 1992; DePrince, 2001). A study of 406 IPV victims found that 67% of women reported co-occurring PTSD and depression symptoms, 16% reported depression alone, and 3% reported PTSD alone (Somberg & Dutton, 2002). Another study of 164 battered women found that 28% reported moderate to severe depressive symptoms; 11% reported severe depressive symptoms (Campbell, Kub, Belknap, & Templin, 1997). Importantly, IPV-related symptoms, such as PTSD, avoidance, and depression, are associated with avoidance of trauma-related cues and disruption in attention and memory systems (e.g., DePrince & Freyd, 1999; 2001; DePrince, Weinzierl, & Combs, 2009; Stein et al., 2004) that may contribute to victims' actual (or perceived) ability and/or willingness

to participate in the criminal justice system. Thus, we tested whether outreach decreased IPV victims' psychological symptoms, including PTSD and depression symptom severity.

Please note that for the purposes of this study, we assessed psychological symptoms with the sole goal of improving our understanding of distress experienced by women victimized by IPV in the context of criminal justice system responses. Any examination of women's psychological distress, though, must be considered in the context of a long history of psychiatric diagnoses used to pathologize women, particularly women exposed to IPV (see Herman, 1992; DePrince & Freyd, 2002). Thus, the current study did not involve "diagnosing" women with disorders; rather, we focused on measuring degree of avoidance and arousal using self-report measures of PTSD and depression. Nor did we focus on "battered women's syndrome" (BWS). BWS, often invoked in the context of legal cases (e.g., criminal defense or self-defense), is inconsistently defined without a unified set of criteria (Dutton, 2004). In comparison to BWS, PTSD and depression are well-validated constructs that have been observed in IPV victims based on reliable and valid assessment instruments. In short, then, our goal was to focus on the validated construct of PTSD among IPV victims in the context of their experiences with the criminal justice system, but not to pathologize women for experiencing distress in the face of abuse by their intimate partners.

In addition to affecting IPV victims' response to outreach from the criminal justice system, psychological distress has been linked to social support among IPV victims (e.g., Campbell, Sullivan & Davidson, 1995; El-Bassel, 2001). For example, higher levels of social support upon leaving a shelter predicted lower levels of depression six months later in female IPV victims (Campbell et al., 1995). However, social support is not uniformly offered to women, pointing to the importance of examining demographic moderators. For example,

younger women appear to receive less social support than older women (Barnett & Martinez, 1996; Belknap et al., 2001; Belknap et al., 2009). Because increasing victims' social support through early outreach may help decrease psychological symptoms, and thus, have a positive impact on criminal justice outcomes, we were interested in whether outreach affected social support.

Social support also appears to relate to victims' decisions in the criminal justice process in the extant research. Emotional and practical support from victim assistance staff appears to influence women's commitment throughout the criminal justice process (Erez & Belknap, 1998; Hoyle & Sanders, 2000). Tangible social support –such as availability of people to assist with practical issues – was associated with victim cooperation with the criminal justice system (Goodman et al., 1999). Formal support (such as from the criminal justice system, medical professionals, legal professionals) was associated with higher likelihood of speaking directly with the prosecutor; informal and general support was not associated with talking directly to the prosecutor (Belknap et al., 2001).

Perceptions of Procedural Justice. Women's perceptions of procedural justice may also influence their decisions to participate in official action. Procedural justice focuses on the processes employed rather than just the outcomes from a dispute (Thibault & Walker, 1975). Researchers have consistently found that the manner in which legal decisions are imposed, rather than the outcome of the legal process alone, has a powerful and independent effect on why people obey the law (Tyler, 1988, 1990). Research suggests that the way system representatives interact with victims and defendants influences their perceptions of the system and perhaps their future behavior (Tyler, 1990; Tyler & Lind, 2001). Indeed, negative experiences with the

authorities responsible for protection (e.g., police, prosecutors) decreased women's participation in official action (Fleury-Steiner et al., 2006; Gondolf & Fisher, 1988).

Procedural justice practices appear to have an important influence on domestic violence cases. For example, the manner in which sanctions were imposed on domestic violence offenders had a stronger influence on subsequent behavior than the sanction itself (Paternoster et al., 1997). Domestic violence offenders who were arrested and viewed the process as fair were more likely to comply with sanctions. A similar study found positive support for procedural justice aspects of a criminal domestic violence court in Lexington County, South Carolina (Gover, Brank, & MacDonald, 2007). Interviews with domestic violence victims and defendants indicated a high rate of satisfaction with the court. For example, the majority of victims and defendants thought that their case was handled in a fair, good, or excellent manner and thought they were treated with respect and dignity by the court.

In addition to the influence that procedurally just processes have on offender behavior (i.e., compliance), the experiences that victims have with the criminal justice system can impact their future behavior (e.g., Bowman, 1992). As suggested by Hickman and Simpson (2003), crime victims mobilize the criminal justice system in most cases because they are the ones who decide whether or not to report a crime. Therefore, the treatment that victims receive during their interaction with law enforcement can potentially impact whether they decide to report crime in the future. According to the philosophy of procedural justice, victims who have positive experiences and feel that they were treated fairly by representatives of the criminal justice system will be more inclined to make contact with the criminal justice system in the future. In the current study, we examined whether women who received outreach had a more positive view of how they were treated by the court when called to testify than other women.

Spatial Influences. Historically, IPV victim behaviors (particularly choices to *not* support official action) have been interpreted as a function of personality factors rather than as a function of geographical and socio-economic barriers to full participation in the system, making spatial studies in this population particularly important. Studies of victimization risk have increasingly considered neighborhood variables. For example, revictimization has been associated with the neighborhood incivilities (e.g., poor street lightening, vandalism, litter and garbage on street, abandoned houses/buildings), ethnic heterogeneity, and population density in traditional self-report and census-based analyses (Outlaw et al., 2002). Of the very few studies in the domestic violence literature that applied powerful GIS technology to examine spatial correlations of IPV and neighborhood characteristics, poverty emerged as an important factor in IPV cases reported to the police (Miles-Doan, 1998). The current study extended past research by modeling accessibility to the courthouse to understand victim decisions to go to court. We predicted that spatial factors, such as distance to offices, availability of public transportation, would predict victim "non-cooperation" with criminal legal proceedings. For example, victims who do not have easy access to transportation may *not be able* (versus *not want*) to take advantage of services or participate in justice proceedings. Thus, spatial factors, such as accessibility of services, may contribute to our understanding of women's participation in the system and well-being.

Overview of Current Study. The current study evaluated the impact of community-based outreach to victims on several criminal justice and victim well-being outcomes. As we will describe in the Methods section of this report, relevant criminal justice system-and community-based agencies were stakeholders in the outreach design and implementation. Prior to the inception of the Triage Project evaluated in this study, police-reported victims of IPA received

referrals to community-based agencies from a *system*-based advocate located in either the Victim Assistance Unit (VAU) of the Denver Police Department (DPD), City Attorney's Office, or District Attorney's Office. Referrals, while potentially useful for connecting women with resources, place the burden on women to initiate contact with relevant community-based agencies. The primary goal of the Triage Project was to implement a victim-focused community-based outreach intervention, which is hence referred to as outreach and signified by "O". Distinct from the referrals provided by system-based advocates to victims, O in the current evaluation involved community-based advocates initiating outreach by phone to IPV victims at case inception (regardless of prosecution filing status). Community-based advocates, unlike system-based advocates, can offer women access to *confidential* support and services. Consistent with expectations that victim-focused, community-coordinated outreach programs be flexible and individualized (e.g., Davies et al., 1998; Goodman & Epstein, 2005), the community-based agency designated to make outreach was chosen based on both the needs reported by victims (usually to system-based advocates in the police department or prosecuting attorney offices) and the Review Team's assessment of the most pressing needs in the case (e.g., legal advocacy versus support).

At the start of this research, half of the cases were assigned to community-based outreach, hence signified by "O". The remaining cases were assigned to treatment-as-usual under the old system: referrals offered during phone contact with system-based advocates, hence signified by "R". For the purposes of this experimental design, a team leader on the Triage Team used an algorithm to randomly assign women to the O or R condition during the study period, thus allowing us to compare the coordinated outreach intervention to the treatment-as-usual (referral) condition. Participants were interviewed at three points in time: initial interview

following police-reported IPA (Time 1; T1), and 6- (Time 2; T2) and 12-months (Time 3; T3) later.

Methods

Evaluation Site

Denver Colorado is unique in being a contiguous city, county, and judicial district. Therefore, there are municipal ordinances as well as state statutes that apply to IPV cases. Both the City Attorney (CA) and District Attorney (DA) Offices prosecute cases and municipal/County Court judges as well as District (State) judges preside over cases. Historically, IPV victims have received referrals to community-based victim services in letters sent by either the CA or DA) Office after cases came to the attention of the criminal justice system. However, given the complexity of the system, our system- and community-based partners expressed concerns that victims inconsistently received referrals, particularly when cases were not filed for prosecution.

In 2005, the Department of Public Safety in the City and County of Denver received funding from the Office on Violence against Women (OVW) to initiate the Domestic Violence Coordinated Triage Intervention Project (Triage Project). The primary goal of the Triage Project is to coordinate community response to IPV victims in Denver City and County across law enforcement, prosecution, and system- and community-based service agencies. Project partners include representatives from law enforcement, criminal justice system, and community-based agencies. The Triage Project includes a multi-disciplinary Review Team that meets daily to facilitate comprehensive coordination of information to address victim safety issues, offender containment strategies, and efficient case filings. Through the Review Team, outreach to victims is initiated by community-based agencies (referred to as the Outreach Program). In addition,

victim advocates from the Denver Police Department's Victim Assistance Unit also provide victims with referrals, which served as our treatment as usual condition in the current project.

Intervention

Through the Outreach Program, community-based agencies initiate contact with IPV victims at case inception, regardless of prosecution filing status. Outreach by community-based agencies offers women a confidential means of accessing support and services (versus advocacy within the criminal justice system that is not confidential). In addition to the three core community agencies on the Review Team, the Denver Domestic Violence Coordinating Council (DDVCC) serves as a central organizing body and assists with referrals to agencies outside the core collaborators as needed. The outreach agency is chosen based on both the needs reported by victims (usually to the Denver Police Department's Victim Assistance Unit or system advocates) and the Review Team's assessment of the most pressing needs in the case (e.g., legal advocacy versus support). The Review Team discusses approximately 350-450 cases/month. As part of this grant, the Review Team randomly selected women to receive Outreach from community-based agencies (O) or treatment as usual. Treatment as usual involved receiving referrals (R) to community-based agencies from a victim advocate in the Victim Assistance Unit of the Denver Police Department (DPD). Thus, both O and R conditions involved phone contacts from a trained victim advocate and referrals specific to the woman's needs and/or concerns of the interdisciplinary team. The primary difference between the conditions was the phone outreach made by a community-based agency. Therefore, we were able to implement a rigorous experimental design comparing similar conditions that differed only in whether or not community-based agencies initiated outreach to women.

Timeframe for Evaluation

Randomization of women to Outreach or Referral began in December, 2007. Data collection began in January, 2008 and was completed in December, 2009. Because IPV victims are at high risk for revictimization (Belknap & Sullivan, 2002) and we were interested in the effects of outreach over time, we interviewed women 6- (Time 2; T2) and 12-months (Time 3; T3) after the initial interview (Time 1; T1).

Participants

Participants (N=236) were recruited from the population of IPV cases referred to the Triage Team in Denver from 5 December 2007 through 14 July 2008. We received 1,416 police reports during the study period. Of those reports, 2% (n=24) were excluded because they were monolingual Spanish speakers; 3% (n=42) were excluded because of high-risk case status as determined by the Triage Review Team; 1% (n=11) were excluded because the victim had moved out of the area (including one victim who passed away); 6% (n=78) were excluded because the reports involved a victim or case which appeared in another report; and 9% (n=133) were excluded by the Denver Police Department at the time of referral. Of those 133, 76 were excluded because the Triage team determined (prior to randomization) that the case presented extremely high risk for the victim (e.g., a pregnant victim for whom the incident involved a weapon). The remaining victims were excluded for a mix of reasons (e.g., presence of a cross-arrest, same sex partner, administrative error, etc.). An additional 20% (n=276) of reports involved victims who could not be reached for recruitment due to incorrect contact information or no contact information (e.g., due to transient living status). In 2% (n=25) of cases, we failed to attempt contact because of administrative errors in tracking incoming reports. Thus, of the original 1,416 reports, we were able to attempt to recruit 827 (58%) women.

Of the 827 women who we could attempt to recruit, 29% of women scheduled and came to the first session. Only 9% (n=78) declined to participate when reached by phone; while 8% (n=64) told us they would call back if interested, but did not. Finally, 15% (n=125) scheduled a first session, but either cancelled or did not attend the scheduled interview session and were not successfully rescheduled. Another 39% (n=321) were never reached by phone, although voice messages were left by the research team. For the purposes of estimating our recruitment success, we included these 321 among the women who could have been recruited; however, our calls were not received, so we did not have confirmation regarding whether our contact information was correct or not.

We used spatial data to explore issues of representation in our sample relative to reported incidents of IPV. Figure 1 illustrates where study participants reported living at the time of the incident (in red) relative to addresses of all IPV incidents reported across the city/county during the study period (in yellow); the latter data were accessed from DPD. From this image, we note two important trends. First, IPV reports have a spatial pattern generally; that is, IPV reports are not equally distributed across Denver. Di Bartolo's (2001) spatial and class research on IPV cases in Brisbane, Australia also found an

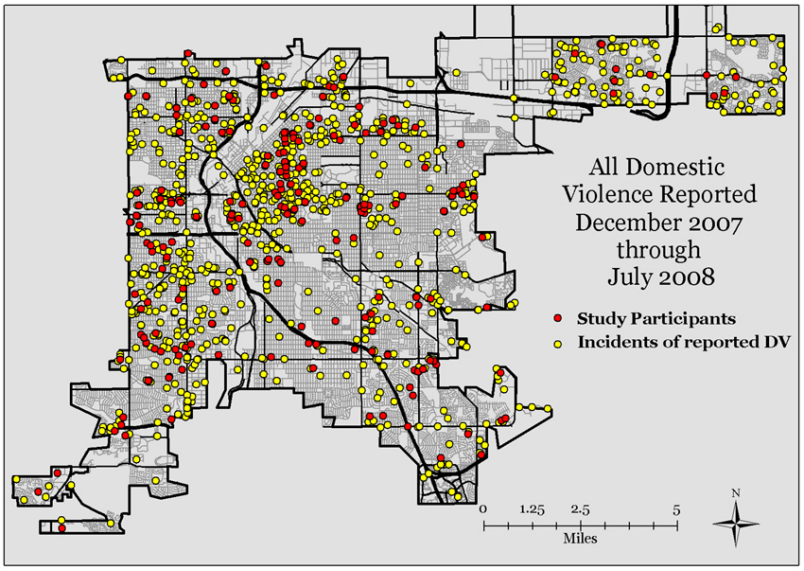


Figure 1. Participants' Time 1 addresses relative to location of overall IPV reports during the recruitment period.

unequal distribution of police IPV arrests, with a strong correlation between economic disadvantage and risk of IPV arrest.

The second finding in our spatial data analysis was that the participants recruited into the study appear to be representative of the spatial locations of IPV incident reports in Denver. Because these spatial locations provide a source of information on demographic characteristics of neighborhoods (e.g., income, proportion of ethnic minority), our sample appears to be drawn from diverse spatial locations that reflect the distribution of reported incidents. This suggests that we were able to recruit a sample that is representative, in terms of spatial location and spatially-relevant demographic variables, of incidents of IPV reported in Denver more generally. However, because we were not able to quantify the demographic characteristics of the population, we cannot comment with certainty about the representativeness of our sample to all women who have incidents of IPV reported to law enforcement.

Of the 239 women who scheduled and attended a first session, 1 declined to participate during the informed consent process; 1 was not interviewed because she appeared to be under the influence of alcohol; and 1 did not pass the consent quiz. Thus, we enrolled 236 women into the study. Demographic data for those 236 women reflect successful recruitment of a diverse sample in terms of racial/ethnic background, marital status, and years of education. Specifically, women's ages ranged from 18-63, with an average age of 33.4 (SD = 11.0). Women reported their racial backgrounds to be 47% White/Caucasian, 30% Black or African-American, 2% Asian, 1% Pacific Islander, 11% American Indian or Alaskan Native, and 6% other. In addition, 39% of women identified as Hispanic or Latina. Across categories, 174 women (74%) identified as belonging to one or more ethnic minority groups. Almost half the sample reported having ever been married (49%). Women described their current relationship status to be: 9% married, 8%

living with someone, 18% divorced, 12% separated, 2% widowed, 40% single and never married, and 7% other. Women reported the following in terms of highest level of education attained: 3% 1-8th grade; 27% some high school; 26% high school; 25% some college; 8% Associate's degrees; 7% 4-year college degree; 2% postgraduate education; and 1% other (e.g., trade school).

Time 2 (T2) data collection began in July 2008. We retained 192 of the 236 participants scheduled for T2 interviews, for a T2 retention rate of 81%. Demographic data for these 192 women reflect successful retention of a diverse sample in terms of racial/ethnic background, marital status, and years of education. Specifically, women's ages ranged from 18 to 64, with an average age of 33.7 (SD = 11.1). Women reported their racial backgrounds to be 44% White/Caucasian, 32% Black or African-American, 2% Asian, 2% Pacific Islander, 12% American Indian or Alaskan Native, and 5% other. Forty percent of women identified as Hispanic or Latina. Women described their current relationship status to be: 10% married, 9% living with someone, 26% divorced, 6% separated, 3% widowed, 46% single and never married, and 1% other. Women reported the following in terms of highest level of education attained: 3% 1-8th grade; 26% some high school; 27% high school; 25% some college; 8% Associate's degrees; 7% 4-year college degree; 3% postgraduate education; and 2% other (e.g., trade school).

Time 3 (T3) data collection began in January 2009. We retained 189 of the 236 participants scheduled for T3 interviews, for a T3 retention rate of 80%. Demographic data for these 189 women reflect successful retention of a diverse sample in terms of racial/ethnic background, marital status, and years of education. Specifically, women's ages ranged from 19-64, with an average age of 35.0 (SD = 10.9). Women reported their racial backgrounds to be 47% White/Caucasian, 29% Black or African-American, 0.5% Asian, 0.5% Pacific Islander,

11% American Indian or Alaskan Native, and 5% other. Forty percent of women identified as Hispanic or Latino. Women described their current relationship status to be: 13% married, 9% living with someone, 24% divorced, 8% separated, 2% widowed, 42% single and never married, and 3% other. Women report the following in terms of highest level of education attained: 3% 1-8th grade; 24% some high school; 26% high school; 28% some college; 9% Associate's degrees; 7% 4-year college degree; 3% postgraduate education; and 2% other (e.g., trade school).

IPV survivors tend to be a highly mobile group compared to the general population. This can be a result of staying under their abusers' "radar", having to move, and/or not being able to afford a place to live or even a phone (being more reliant on temporary housing, living with friends or family, or even homelessness). Thus, longitudinal studies of IPV survivors are particularly difficult in terms of sample retention. Notably, 84% of women from the original sample (T1) were retained at either T2 or T3.

Participant Retention. We examined relationships between key variables and retention status, defined as whether women were retained at T2, T3, or both time points (T2/T3). Of most importance, there was no relationship between retention status at T2, T3, or T2/T3 and group condition (O, R, D, NR).

We next examined retention status in relation to case disposition. We found no relationship between retention status and the number of guilty verdicts or the severity of the final case disposition. We also examined case disposition in terms of the following categorical outcomes: no charges filed; refused charges; dismissed, all charges not guilty; and at least on charge guilty. Women whose cases were never filed were more likely *not* to be retained at T2, T3, and T2/T3; however, this affected a small number of women. Only 8 women had cases not filed; but 75% of these women were not retained at T2. When we excluded these 8 women from

the analysis, there was no relationship between retention status and case disposition categorical outcomes.

Several T1 variables were related to retention status. In particular, living with the offender at T1 was associated with decreased likelihood of retention at T2 ($X^2(1)=6.38$, $p=.01$) and T2/T3 ($X^2(1)=5.34$, $p=.02$), but not at T3. Of women living with the offender at T1, 33% did not return for a T2 interview compared to 16% of women not living with the offender. Forty-one percent did not return for a T2/T3 interview compared to 23% of women not living with the offender. Living with the offender at the time of the incident was associated with a significantly decreased likelihood of retention at T2/T3 ($X^2(1)=4.17$, $p=.04$), though this effect was only a trend at T3 ($X^2(1)=3.57$, $p=.06$). Of women living with the offender at the time of the incident, 25% did not return for a T3 interview compared to 15% of women not living with the offender at the time of the incident (32% and 20% respectively for T2/T3). Lower socio-economic status was associated with decreased retention rates at T3 ($t(228)=-2.45$, $p=.01$) and T2/T3 ($t(228)=-2.66$, $p=.008$).

Other demographic variables (e.g., age, having children at T1, ethnic minority group) were unrelated to retention status. In addition, T1 reports of PTSD symptom severity, depression symptom severity, and social support fear were unrelated to retention status at all interview time points. Finally, the number of initial charges in cases was unrelated to retention status.

Materials

Severity of the target domestic violence incident that resulted in a report to law enforcement was assessed using the Conflict Tactics Scale (CTS: Straus, Hamby, Boney-McCoy, & Sugarman, 1996). The CTS is a widely-used and well-validated instrument for assessing conflict in intimate relationships. We used CTS items to tally the total number of psychologically

(possible range: 0-15) and physically (possible range: 0-13) aggressive tactics used by the male partner against the female partner during the target incident as well as the number of injuries sustained by the female partner (possible range: 0-17). In addition, we created a tally of the total number of stalking behaviors engaged in by the offender (possible range: 0-12). We also calculated the severity of psychological aggression, physical aggression, and injury on a scale of 0-2, where 0 indicated the absence of a particular form of aggression, 1 indicated presence of moderate aggression (e.g., insulted or swore, grabbed, sprained, or bruised), and 2 indicated presence of severe aggression (e.g., destroyed belongings, punched or hit, knocked unconscious). Severity codes for individual items within each subscale are indicated by CTS scoring guidelines (Straus et al., 1996).

Criminal Justice Outcomes. We used publicly accessible data to determine the disposition of cases for all women in the study. We coded case disposition in several ways. First, we coded disposition status as categories, including no charges filed; refused charges; dismissed; all charges not guilty; and at least on charge guilty. Second, we calculated the total number of charges for which the offender was found guilty. Finally, we coded the severity of the case disposition as follows: not guilty on any charge; most serious guilty verdict was city case; most serious guilty verdict was misdemeanor; and most serious guilty verdict was felony.

At T3, we asked women to consider the things that they might have been asked to do since the incident to help with the prosecution of the offender. We first presented women with a list of common things they might be asked to do over the year as a memory prompt. This list included: return phone calls; give information about witnesses; give information about the incident; attend a meeting; respond to a subpoena; go to court; testify at court; provide updated contact information; and other. Women indicated which category best described them from the

following: I did everything the prosecuting attorney's office has asked; I have done some but not all of the things the prosecuting attorney's office asked me to do; I have not done anything the prosecuting attorney asked.

At each time point, we asked women if they had been asked to go to court (yes, no). If women indicated yes, we asked whether they went (yes, no). We created two dichotomous variables to reflect court-related activities: (1) was she ever asked to go to court during the study period (at T1, T2, and/or T3): yes/no; and (2) did she ever go to court (at T1, T2, and/or T3): yes/no. At T3, we asked women who had testified in court to report the extent to which she felt she was treated with respect and dignity, ranging from 1 (very much) to 4 (not at all).

Psychological Variables. We asked women to report on several relevant psychological variables.

PTSD Symptoms. PTSD symptoms were assessed with the Posttraumatic Stress Diagnostic Scale (PDS; Foa, Cashman, Jaycox, & Perry, 1997). The PDS is a 49-item measure based on the DSM-IV criteria for PTSD. A total score that reflects PTSD symptom severity was calculated by taking the sum of all items. Coefficient alpha was as follows for each time point: T1=.82; T2=.93; T3=.93.

Depression Symptoms. Depression symptoms were assessed with the Beck Depression Inventory – 2 (BDI-II; Beck, Steer, Ball, Ranieri, 1996). The BDI is among the most widely used self-report measures of depression with demonstrated validity and reliability. This 21-item measure assesses depression symptoms based on DSM-IV criteria. Items are summed to create a total depression score. Coefficient alpha was as follows for each time point: T1=.89; T2=.91; T3=.91.

Fear. IPV-related appraisals were assessed using the Trauma Appraisal Questionnaire (DePrince, Zurbriggen, Chu, & Smart, in press), a 54-item self-report measure of posttraumatic appraisals that demonstrated excellent reliability and validity. TAQ items were generated based on extensive semi-structured interviews with community participants exposed to a wide range of potentially traumatic events. From participants' descriptions of feelings, beliefs, and behaviors associated with traumatic experiences, items were generated. Items were refined using a factor analytic strategy. Test-retest reliability was excellent. The validity of the measure was assessed in two undergraduate and one community sample. The measure showed excellent convergent and discriminant validity. The measure provides subscale scores for six distinct appraisals – anger, alienation, fear, betrayal, shame, and self-blame; we used the fear subscale for the analyses in the current paper. Individuals were asked to think about how they feel now when they think about the target traumatic event while answering the TAQ. Coefficient alpha for the fear subscale was as follows at each time point: T1=.93; T2=.91; T3=.90.

Social Support. We included two measures of social support. First, participants were asked to complete a 16-item version of the Interpersonal Support Evaluation List (ISEL; Cohen & Hoberman, 1983; Cohen et al., 1985), which includes items that tap belonging, tangible support, and perceived support. The ISEL has been used in other studies with IPV victims to examine links between different types of support and factors such as self-esteem (e.g., Crane & Constantino, 2003). Relevant items were reverse-scored and an average was computed across items such that higher scores indicate greater levels of social support. Coefficient alpha for this scale at each time was as follows: T1=.87; T2=.87; T3=.86.

Second, we asked women to respond to eight questions about social support previously used by Sullivan and Bybee (1999) to indicate how satisfied they were with both the amount and

the quality of social support received in the past year. The types of social support assessed by this measure included emotional support, practical assistance, advice and information, and companionship. Women responded on a 7-point scale that ranged from 1 (extremely pleased) to 7 (terrible). We computed a mean score across the eight items.

Stages of Change. At T3 we asked women to report on the status of their relationship with the offender and, if still together, their readiness to leave the relationship. Questions included: (1) Are you currently in a relationship with the offender?; (2) If not, have you been out of the relationship for over 6 months?; (3) Are you thinking about leaving the relationship sometime in the next 6 months?; (4) Are you planning to leave the relationship in the next 30 days?; and (5) Have you left the relationship or tried to leave sometime in the past year?. According to the Transtheoretical Model of Stages of Change, women who were still in a relationship with the offender and were not considering leaving in the next 6 months were coded as 1 (Precontemplation). Women who were still in the relationship with the offender but were considering leaving in the next 6 months (and not planning to leave in the next 30 days) were coded as 2 (Contemplation). Women who were planning to leave in the next 30 days and had previously left or tried to leave the relationship in the past year were coded as 3 (Preparation). Women who had left the relationship within the past 6 months were coded as 4 (Action). Finally, women who had left the relationship over 6 months ago were coded as 5 (Maintenance).

Transportation. We created a survey of questions to assess access to and perceived problems with transportation. In particular, we asked women to report how often they drove; and how often they used public transportation (including bus or lightrail). Women who reported using cars were also asked about the percentage of time she drove herself or got a ride from someone else; who owns the car; and the percentage of time she has access to a car when she

really needs it. In addition, women were asked about 9 problems related to driving (e.g., cost of gas, problems finding directions) and 7 problems related to taking public transportation (e.g., distance of bus/lightrail stop from home, costs of tickets). We calculated the average number of problems women reported for both. We also asked women to report on their addresses. At T1, we asked women to report the address where they lived when the incident occurred as well as their current address. At T3, we asked women to report the address where they lived the bulk of the time while their case was open.

Responses to Research Participation. We monitored women's responses to research participation closely. One of the tools we used for this is the Response to Research Participation Questionnaire (RRPQ; Newman & Kaloupek, 2001, 2004). Three factors (Participation, Personal Benefits, and Global Evaluation) tap positive aspects of the research experience, including perceptions of personal benefits. Specifically, the Personal Benefit scale taps benefits to the individual, such as gaining insight or meaning. Sample items include: I gained insight into my experiences through research participation; I found participating in this study personally meaningful. The Global Evaluation scale taps beliefs about the importance of the research and the integrity of the research process. Sample items include: I was treated with respect and dignity; I trust that my replies will be kept private. The Participation scale taps important global concepts, such as the participants' perceptions of the value of the trauma-related research and the participants' beliefs about empowerment to stop the research. Sample items include: I like the idea I contributed to science; I felt I could stop participating at any time.

Two factors tap negative aspects of the research, including costs and unanticipated, negative emotional reactions. The Drawbacks scale taps regret and negative perceptions about the research procedures (e.g., too long, boring). Sample items include: The research raised

emotional issues for me that I had not expected; I experienced intense emotions during the research session. The Emotional Reactions scale taps unexpected and negative emotions during participation. Sample items include: Participating in this study was inconvenient for me; Knowing what I know now, I would participate in this study again (reverse scored).

Coefficient alpha for each subscale at each time point are described in Table 1.

Table 1. Cronbach's alpha for RRPQ scales at each time point.

	T1	T2	T3
Emotional	.83	.85	.83
Drawbacks	.68	.69	.68
Personal benefit	.72	.77	.80
Global evaluation	.79	.81	.87
Participation	.49	.47	.64

Procedure

Prior to Review Team meetings, the Triage Team leader applied an algorithm to randomly assign victims to the outreach and control conditions. The assignment outcomes were not revealed to others until after the team's risk assessment (see below). Also prior to the Review Team meetings, a system-based advocate (from the DPD Victim's Assistance Unit (VAU) or the City or District Attorney's Office) attempted initial contact with the victim to assess needs. At the Review Team meeting, the team evaluated risk *prior* to viewing the condition (O or R). The Review Team was kept blind to the O/R condition until after the risk assessment was completed to assure that risk was not evaluated differently depending on whether or not the woman was selected for outreach or referral. If the team believed that the victim was at grave risk, she was determined to be ineligible for the study and automatically referred for outreach by the VAU. The interdisciplinary Review Team made decisions about grave risk on a case-by-case basis, guided by research on risk factors for serious harm and fatalities.

After the completion of the risk assessment, the assigned condition was revealed to the Review Team. Among women selected to receive community-based outreach, the Review Team then chose a lead outreach agency based on the concerns expressed by the victim (usually to Denver Police Department VAU Staff) and the concerns of the Review Team. The Triage partner agencies included: AMEND, Project Safeguard, SafeHouse Denver, and the Denver Domestic Violence Coordinating Council (DDVCC). The DDVCC was assigned as needed to coordinate outreach from agencies outside of Review Team partner agencies if special needs for victims arose (e.g., DDVCC might coordinate services for a victim with a hearing impairment with an agency that specifically provides services for the hearing impaired community). Community agencies generally began attempts to contact women for outreach within 24 hours of the Review Team meeting. For women not selected for outreach, the system-based advocate made referrals (often, but not necessarily, to the same partner agencies described above).

Procedure for Participant Recruitment. The Research Team accessed publicly-available police incident reports from the DPD approximately 2-3 times/week. A lead letter was sent to women within a day of receiving incident reports. The letter indicated to women that they were invited to participate in a Women's Health Study and that a researcher would be calling in the coming days to provide additional information about the study. In addition, the lead letter invited women to call the research office directly if they preferred. To encourage participation, the letter mentioned that participants would receive $50 for the T1 interview, $55 for the T2 interview, and $60 for the T3 interview (see Sullivan et al., 1996). Approximately 3 days after the lead letter was mailed, research staff began making phone calls to invite participants. Please note that recruiting materials (both lead letters and phone scripts) did *not* mention IPV in order to decrease safety risks to potential participants. If during the phone contact women asked where the

researchers got their names, they were told “from publicly available records” in order to avoid mentioning IPV or law enforcement during the phone call.

During the phone contact with the researchers, potential participants were invited to attend a 3-hour session to fill out questionnaires and answer interview questions about women’s health. To maximize participation, women who indicated that they would have to take public transportation to the interview were offered cab transportation. In such cases, the research team coordinated cab pick-up/drop-off for both the trip to and from the interview. Women were also asked if they needed childcare during the testing session; if so, childcare was arranged in a room near to the office where the woman was to be interviewed.

Procedure for In-person Data Collection and Consent. All interviewers underwent extensive training prior to data collection regarding ethical and clinical issues involved in conducting research on IPV as well as extensive training on the study protocol. Prior to conducting interviews themselves, interviewers completed mock interviews; observed the PI conduct at least one interview with a participant; and were observed by the PI conducting at least one interview with a participant.

At T1, participants were greeted by a female interviewer (a graduate-level interviewer and/or the PI) who carried out the interviews and administered questionnaires. At T1, interviewers presented consent information to participants in writing and verbally. At this time, the researchers disclosed to the women that their names had been identified based on publically accessible information from police reports. Participants were informed about the scope of the study as well as their rights as participants. Participants were informed that data were to be maintained anonymously using a code created by participants (the code was created using digits and letters from personal information that the victim, and not the researcher, would know). A

separate list of contact information and dates for T2 and T3 data collection were maintained *without* participant codes. Thus, researchers knew when to contact participants for follow-up data collection. At T2 and T3 sessions, women re-created their unique codes to allow data from each session to be connected. During the consent process, participants were also asked to sign a release to allow the research team to request information from the CA/DA's offices.

The participant completed a "consent quiz" designed to assess understanding of the consent information. If any questions were initially answered incorrectly, the correct information was provided and the question re-administered. Women were required to answer all questions correctly by the second try in order to be considered consented into the study. One woman was not able to pass the consent quiz; she was thanked for her time and paid, but not enrolled in the study. Following consent procedures, participants completed the interview and questionnaires. Women were offered breaks frequently as well as snacks and beverages. Finally, all participants were asked to complete a Response to Research Participation Questionnaire (RRPQ) to monitor the cost-benefit ratio of participation in this project in an on-going manner (see DePrince & Freyd, 2004).

During the T1 interview, women were asked to identify three "safe" people who would always know where they were and whom we could contact if we had trouble finding women for the T2 and T3 interviews. In addition, women received a business card with the study name (Women's Health Study) and contact information; the month and approximate date of their next interview was noted on the card. The research team then had *no* scheduled contact with women between interviews. Approximately 3 weeks prior to T2 and T3 interview due dates, a lead letter was sent to women letting them know that the researchers would be calling to schedule a follow-up interview for the Women's Health Study. Approximately 2 weeks prior to T2 and T3

interview dates, we began calling women (and their safe contacts if we could not locate them directly) to schedule the follow-up interview. When women arrived for the follow-up interviews, we reviewed all consent information and re-administered the consent quiz. As with T1, women were required to answer all consent quiz questions correctly by the second try to be considered consented into the T2 and T3 interview sessions; all participants passed the consent quiz. At both T2 and T3, participants completed the interview and questionnaires after the consent review procedures. In addition, participants were asked to complete the RRPQ after T2 and T3 interviews as well.

At the end of each interview, women were compensated for their time and debriefed as to the purposes of that interview. Women received a newsletter that provided referrals to community agencies dealing with health and violence issues; women were told that they did not have to take the newsletter if they worried that having such material would pose a threat to them if discovered by an aggressive partner. Finally, women received $50 for the T1 interview, $55 for the T2 interview; and $60 for the T3 interview.

Results

Equivalence of Groups on Demographic and Case Characteristics

The Triage Team randomly women to receive outreach (versus referrals, which represented the treatment as usual condition). We originally conceived of our study design in terms of two conditions: Outreach (O) and Referral (R). However, some women declined any assistance (D) or were not reached (NR) by the system-based advocate after three separate attempts. Because women who declined assistance or who were not reached by system-based advocates reflected the reality of cases in Denver, we recruited women from the originally proposed groups and the additional groups that emerged: O, R, D, and NR. For the purposes of

this technical report, then, the analyses that follow describe comparisons between the originally designed two groups (O, R) as well as exploratory analyses of the two other groups that emerged following initial contact attempts from system-based advocates (D, NR). Using all four groups allowed us to examine differences between the groups related to any intervention (O and R) versus none (D and NR) in a jurisdiction with highly collaborative and integrated victim services. Importantly, the D and NR conditions were not randomly assigned; therefore, they cannot be interpreted as control groups for the randomly assigned O and R conditions.

We first tested for equivalence of key factors across the groups at T1, beginning with demographic variables of ethnic minority status, age, education, occupation, and income (see Table 2). Because we did not have a priori predictions about differential responses to outreach as a function of membership in specific ethnic minority groups (and we did not have adequate power to test every ethnic minority group as a separate moderator), we coded women as belonging to an ethnic minority group or not. The groups did not differ in the likelihood that women identified with one or more ethnic minority groups: 78% of women in the O group; 72% of women in the R group; 74% of women in the D group; 69% of women in the NR group identified with one or more ethnic minority groups. (For details on the overall representation of specific ethnic minority groups in the sample, please refer to *Participants* above).

Mean (*SD*) age for participants is reported in Table 2. Before comparing groups, we noted that the income variable was affected by four outlying data points; thus, we replaced these values with value 3 standard deviations above the mean. A series of one-way ANOVAs indicated that the groups did not differ on age, education, income, or occupation. To capture socio-economic status (SES) in a single global score (rather than analyzing relevant correlated variables separately), a principal component analysis (PCA) using orthogonal rotation was

applied to education, occupation status, and income variables. A single component solution emerged with all component loadings above .75; therefore, we saved the factor score for each individual to use in later analyses. The groups did not differ on the Global SES Factor Score.

Groups did not differ in how they described their relationship with the offender at the time of the target incident ($X^2(15)=15.16$, $p=.44$). Table 3 details these descriptions. The "other"

Table 2.
Demographic characteristic of participants by group.

		Mean	*SD*	Range
Age	O	34.1	11.64	18 - 63
	R	33.3	10.32	19 - 61
	D	31.28	10.99	18 - 61
	NR	34.65	10.69	19 - 55
Education Rating	O	4.62	1.62	2 - 10
	R	4.56	1.49	2 - 8
	D	4.19	1.26	2 - 8
	NR	4.33	1.54	2 - 10
Yearly salary non-salary income	O	11969.9	12260.3	0 - 51885
	R	10711.7	10736.6	0 - 40800
	D	13520.8	19011	0 - 51885
	NR	8773.56	11074.4	0 - 51300
Occupation Status	O	33.25	20.74	10 - 90
	R	28.78	19.86	10 - 80
	D	37.25	24.74	10 - 90
	NR	27.74	20.35	10 - 90
Global SES Factor Score	O	0.11	1.00	-1.16 - 3.54
	R	-0.06	0.93	-0.97 - 2.61
	D	0.09	1.15	-0.94 - 3.43
	NR	-0.19	0.90	-0.94 - 3.21

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

category included: in the process of ending a marriage (n=3, 19%); not legally married (past or current common law; had a marriage license, but never sign it; n=8, 50%); divorced, but also identified with another category (n=3; 19 %); and offender is in jail (n=2, 13%).

Table 3.
Women's descriptions of relationship to offender at time of target incident.

% of women in each group:	Husband	Ex-husband	Boyfriend	Ex-boyfriend	Other	Separated
O	15	3	42	21	15	4
R	18	6	45	14	16	0
D	9	6	57	21	8	0
NR	8	2	43	28	17	2

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Groups did not differ in whether or not they were living with the offender at the time of the target incident. Women reported living with the offender at the time of the target incident at the following rates: 49% of women in the O group, 54% of women in the R group, 57% of women in the D group, and 58% of women in the NR group. However, women did differ by group as to whether they were living with the offender at the T1 interview ($X^2(3)=20.57$, $p<.001$). Women reported living with the offender at T1 at the following rates: 9% of women in the O group, 18% of women in the R group, 36% of women in the D group, and 8% of women in the NR group. Although twice as many women in the referral group were living with the offender at T1 as women in the outreach group, this difference was not statistically significant. Rather, follow-up analyses revealed that women in the D group were significantly more likely to live with the offender than women in the other three groups combined ($X^2(1)=17.98$, $p<.001$).

We compared the groups on three dimensions of aggression in the six months prior to the target incident: whether aggression/injuries were present (present/absent); the severity of aggression/injuries (severity); and the total number of aggressive tactics/types of injuries (tally). Among the 230 women who answered CTS questions about the previous six months, Table 4 reports the percentage of those reported that at least one conflict and/or injury occurred.

Table 4.
Percentage of women who reported at least one item on the psychological aggression, physical aggression, or injury scales in reference to the same partner in the last 6 months.

	Psychological Aggression	Physical Aggression	Injury
O	82	58	53
R	96	69	52
D	81	62	51
NR	89	58	57
Total across groups	86	61	53

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Groups did not differ in terms of the severity or tally variables for psychological, physical, and injury scales of the CTS. See Table 5.

Table 5.
Characteristics (tally and severity variables) of aggression in the six months prior to the target incident by Group.

			N	Mean	SD	Range
Psychological aggression	Severity	O	77	1.58	0.78	0 - 2
		R	48	1.83	0.48	0 - 2
		D	52	1.54	0.80	0 - 2
		NR	53	1.70	0.67	0 - 2
	Tally	O	77	5.61	3.77	0 - 13
		R	48	6.38	3.53	0 - 15
		D	52	4.85	3.58	0 - 12
		NR	53	5.42	4.05	0 - 14
Physical aggression	Severity	O	77	1.06	0.95	0 - 2
		R	48	1.23	0.90	0 - 2
		D	52	1.08	0.93	0 - 2
		NR	53	1.04	0.94	0 - 2
	Tally	O	77	2.82	3.31	0 - 11
		R	48	3.15	2.92	0 - 10
		D	52	2.56	3.03	0 - 11
		NR	53	3.17	3.52	0 - 11
Injuries	Severity	O	77	0.90	0.91	0 - 2
		R	48	0.96	0.97	0 - 2
		D	52	0.87	0.91	0 - 2
		NR	53	1.06	0.97	0 - 2

Tally	O	77	1.97	2.60	0 - 8
	R	48	2.25	2.60	0 - 8
	D	52	1.87	2.60	0 - 12
	NR	53	2.77	3.14	0 - 11

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. Severity was rated on a scale of 0 (absence of a particular form of aggression or injury), 1 (presence of moderate aggression or injury) or 2 (presence of severe aggression or injury). Tally is the number of different types of aggressive tactics or injuries reported.

Next, we compared the groups on the same two dimensions of aggression for the target incident: the severity of aggression/injuries and the total number of aggressive tactics/types of injuries. Groups did not differ on these dimensions. See Table 6.

Table 6.
Characteristics of the target incident (severity and tally variables) by Group.

			N	*Mean*	*SD*	Range
Psychological aggression	Severity	O	77	1.62	0.73	0 - 2
		R	48	1.77	0.52	0 - 2
		D	52	1.73	0.63	0 - 2
		NR	53	1.81	0.44	0 - 2
	Total number of tactic types	O	77	4.27	2.66	0 - 11
		R	48	4.58	2.66	0 - 14
		D	52	4.08	2.49	0 - 9
		NR	53	5.13	2.97	0 - 12
Physical aggression	Severity	O	77	1.26	0.88	0 - 2
		R	48	1.35	0.84	0 - 2
		D	52	1.31	0.85	0 - 2
		NR	53	1.40	0.86	0 - 2
	Total number of tactic types	O	77	2.69	2.51	0 - 9
		R	48	3.25	2.86	0 - 11
		D	52	3.04	2.77	0 - 11
		NR	53	2.85	2.63	0 - 11
Injuries	Severity	O	77	1.29	0.90	0 - 2
		R	48	1.25	0.91	0 - 2
		D	52	1.15	0.94	0 - 2
		NR	53	1.38	0.90	0 - 2

Total number of injury types	O	77	3.31	3.26	0 - 13
	R	48	3.71	3.68	0 - 14
	D	52	2.98	2.95	0 - 10
	NR	53	3.70	3.38	0 - 13

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. Severity was rated on a scale of 0 (absence of a particular form of aggression or injury), 1 (presence of moderate aggression or injury) or 2 (presence of severe aggression or injury). Tally is the number of different types of aggressive tactics or injuries reported.

We tested Group equivalence on several other variables of interest related to the case characteristics that may have an impact on case disposition, including perceptions of dependence on the offender, number of initial charges, and victim/offender substance use. The groups did not differ on perceptions of economic and physical dependence on the offender (see Table 7). Please note that a question about perception of physical dependence on the offender was added to the T3 assessment, thus may be affected by retrospective reporting problems; perceptions of economic dependence were assessed at T1. Finally, we tested whether the groups differed on victim and offender alcohol or drug use during the incident (see Table 8). The groups did not differ significantly on victim or offender

Table 7.
Perceptions of dependence; and number of initial charges by Group.

	Group	*Mean*	*SD*	Range
Victim Perception of Economic Dependence on Offender	O	2.21	1.46	1 - 5
	R	2.36	1.65	1 - 5
	D	2.77	1.68	1 - 5
	NR	2.36	1.68	1 - 5
Victim Perception of Physical Dependence on Offender	O	1.26	0.68	1 - 4
	R	1.71	1.18	1 - 5
	D	1.34	0.83	1 - 5
	NR	1.45	1.04	1 - 5
Number of initial charges	O	2.20	0.89	1 - 5
	R	2.30	1.03	1 - 4
	D	2.04	0.71	1 - 4
	NR	2.20	0.78	1 - 4

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. Economic dependence was rated on a scale of not at all important (1) to absolutely necessary (5). Physical dependence was rated on a scale of not at all dependent (1) to entirely dependent (5).

alcohol or drug use, though a trend was noted in the case of victim alcohol use ($X^2(3)=6.94$, $p=.07$). A follow-up analysis revealed that women who were never reached by a system-based victim advocate were more likely to report that they were using alcohol than women in the other three groups combined ($X^2(1)=5.60$, $p=.02$).

Table 8.
Percentage of women in each group who reported the presence of their own or offender alcohol or drug use during target incident.

% of women in each group:	Victim Alcohol Use	Victim Drug Use	Offender Alcohol Use	Offender Drug Use
O	26	13	67	27
R	26	13	63	22
D	17	15	53	33
NR	40	13	71	18

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Effects of Group (O, R, D, NR) and Moderators

As reported below, we first examined the relationship between Group (O, R, D, NR) and primary outcome variables (cooperation, case disposition, service use, PTSD symptoms, depression symptoms, and fear). Next, we examined several key variables for their influence (moderating effects) on the primary outcomes as well as their potential moderating effects on Group effects in this longitudinal data set using a mixed effects models in SAS. Instead of a repeated measures model, we specified subject as a random effect since this designation produced the best fitting error-covariance structure based on model fit indices (AIC, BIC). All results are organized by the primary outcome variable. Candidate moderators included SES (measured by the SES Factor Score described above), having children at T1, living with the offender (at incident, T1), perceptions of dependence on the offender (physical, economic), and identifying with an ethnic minority group.

Criminal Justice Outcomes

The following sections describe analyses related to the effects of groups on criminal justice and victim outcomes.

Women's Reluctance/Cooperation. At T3, women indicated which of three categories best described their cooperation with prosecution since the incident (see Table 9). Multinomial regression was applied to test the effect of Group on the categorical cooperation rating at T3. Results indicated a significant effect of Group (O, R, NR, D) on women's reports of cooperation at T3 ($X^2(6)=18.8$, $p=.005$). Specifically, the odds of total cooperation to no cooperation were 6 times greater for R compared to NR (odds ratio 6:1, beta (B)=1.78; Wald Statistic (W)=7.4, $p=.006$). For O compared to NR, the odds of total cooperation to no cooperation was also 6:1 ($B=1.78$, $W=5.94$, $p=.04$). For R compared to D, the odds of total cooperation compared to no cooperation was 3.4:1; however, this comparison was only significant at $p=.07$ ($B=1.22$, $W=3.36$). Similar results were observed when examining the odds of partial cooperation to no

Table 9.
Women's reports of cooperation at Time 3 (N=147).

% of women in each group:	"I did everything the prosecuting attorney office has asked"	"I have done some, but not all of the things the prosecuting attorney asked me to do"	No, I have not done anything the prosecuting attorney asked"
O	71%	22%	7%
R	63%	30%	7%
D	68%	9%	24%
NR	57%	7%	36%

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

cooperation. For R compared to NR, the odds of partial cooperation compared to no cooperation were 15:1 ($B=2.71$, $W=7.86$, $p=.005$). For D compared to NR, the odds of partial cooperation to no cooperation were 22.5:1 ($B=3.11$, $W=8.00$, $p=.005$). For R compared to D, the odds of partial cooperation compared to no cooperation were 8:1 ($B=2.08$, $W=5.5$, $p=.02$). Finally, the odds of

partial cooperation to no cooperation was 12 times greater for O compared to D, (OR= 12:1, *B*=2.48, *W*=5.77, *p*=.02).

The degree to which a woman perceived herself to be dependent on the offender for her physical well-being did not moderate the effects of group on cooperation. However, across groups, increasing perceptions of physical dependence on the offender reduced the odds of total to no cooperation (*B*=-.62, *W*=7.66, *p*=.006). SES (measured by the SES Factor Score) was associated with cooperation across groups, but did not moderate the effect of group. Specifically, SES was positively associated with cooperation. As SES Factor Scores increased, so did the odds of total to no cooperation (*B*=1.07, *W*=7.49, *p*=.006, *OR*= 2.92) and partial to no cooperation (*B*=1.14, *W*=6.90, *p*=.009, *OR*= 3.13) No significant effects on cooperation were observed for other potential moderators tested, including women's perception of her economic dependence on the offender; belonging to an ethnic minority group; living with offender at the time of the incident; or having children.

Victim Participation in Official Action: Going to Court. We examined whether or not women reported being asked to go to court at T1, T2, or T3. Of the 233 women in the sample, 135 women reported that they had been asked to go to court at some point during the study period. Group (O, R, D, NR) was significantly related to whether or not women were asked to go to court (χ^2 (3)=11.04, *p*=.01). See Table 10. Follow-up analysis on the omnibus chi-square test indicated that women in O versus NR groups differed statistically on odds of being asked to go to court (χ^2 (1)=3.90, *p*=.048). Specifically, the NR group was twice as likely to *not* be asked to go to court compared to asked (Risk Estimate =2.00) whereas women in the O group were more likely to be asked than not asked (Risk Estimate =1.42). We also noted that 67% of women in O and R conditions combined were asked to go to court while only 47% of women in the D

and NR conditions combined were asked. We conducted a follow-up analysis comparing women in the O and R groups combined to women in the D and NR groups combined. Women in the O and R groups combined differed significantly from women in the D and NR groups combined (χ^2 (1)=10.21, p=.001).

Table 10.
Women's reports of being asked to go to court (yes/no) during study period (N=233).

	No	Yes
% of women in each group:		
O	32	68
R	34	66
D	49	51
NR	57	43

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Of the 135 women asked to go to court at some point during the study, 91 reported that they went while 40 women reported that they did not go (4 women were excluded from these analyses because they reported an intention to go to court, but did not have to go in the end for reasons such as a plea being entered). Though no overall group differences were detected in the likelihood women went to court by Group (χ^2 (3)=4.88, p=.18), an analysis comparing O and R groups directly pointed to an important trend: women in the O group were more likely to go to court than women in the R group (χ^2 (1)=1.27, p=.14; Risk estimate=2.09; Cohen's d=.20). See Table 11.

Table 11.
Women's reports of going to court (yes/no) during study period (N=131).

	No	Yes
% of women in each group:		
O	23	77
R	38	62
D	26	74
NR	45	55

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Analyses did not reveal any significant moderators for the effects of Group on going to court. However, we conducted several follow-up analyses to examine O versus R conditions among subgroups of interest. For example, looking only at women who were asked to go to court who identified with an ethnic minority group (n=62), data revealed a significant effect of outreach relative to referral ($\chi^2(1)=10.21$, $p=.001$; Risk estimate=3.2, Cohen's $d=.50$). In particular, 78% of ethnic minority women assigned to the O condition went to court while only 53% of ethnic minority women assigned to the R condition went to court.

Case Disposition. As noted in the Methods section, we examined case disposition in several ways. First, we present case disposition variables that were coded continuously. In particular, we calculated the total number of charges for which the offender was found guilty (*Mean*: 2.19; *SD*: .86; Range 0-2). In addition, we coded the severity of the case disposition on a scale of 1 to 4, where 1=not guilty on any charge; 2=most serious guilty verdict was city ticket; 3=most serious guilty verdict was misdemeanor; and 4=most serious guilty verdict was felony. Mean (SD) for these variables by group are presented in Table 12. The groups did not differ on number of guilty counts ($F(3, 232)=.45$, $p=.72$) or severity of case disposition ($F(3,232)=.82$, $p=.48$).

Table 12.
Mean (SD) for case disposition variables by group.

		Mean	*SD*
Number of Guilty Charges	O	.58	(.52)
	R	.58	(.57)
	D	.53	(.54)
	NR	.65	(.52)
Severity of Case Disposition	O	.89	(.91)
	R	.84	(.91)
	D	.66	(.73)
	NR	.80	(.71)

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. Severity of the case disposition: 1=not guilty on any charge; 2=most serious guilty verdict was city ticket; 3=most serious guilty verdict was misdemeanor; and 4=most serious guilty verdict was felony.

Next, we coded case disposition status categorically as follows: no charges filed (n=8); refused charges (n=10); all charges dismissed (n=71), all charges not guilty (n=5); and at least one charge guilty (n=133). Table 13 describes disposition status by Group. At the time of analysis, 5 cases were missing disposition information (e.g., because a case was sealed) and 4 cases were still open.

Table 13.
Percentage of cases in each disposition category as a function of group (N=227).

% of women in each group:	No Charges Filed	Refused Charges	Dismissed	Not Guilty All Charges	At Least One Charge Guilty
O	5	1	33	3	58
R	6	4	29	6	55
D	0	13	31	0	56
NR	2	2	31	0	65

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Because very few women fell into the "refused charges" or "not guilty all charges" categories, we re-coded the 5-category disposition status variable into a 3-category variable to reflect amount of prosecutorial effort required (Campbell, 2009). See Table 14. In particular, no charges filed or refused charges were coded as 1 (no/refused charges); dismissed as 2 (dismissed); and not guilty/guilty at least one charge as 3 (verdict entered).

Using this 3-category approach, we detected no overall differences by Group ($\chi^2(6)=3.48$, $p=.75$). However, the odds of dismissal versus verdict entered were decreased for women who identified as a member of an ethnic minority ($B=-.36$, $W=4.76$, $p=.029$). Additionally, SES (as measured by the SES Factor Score) was negatively associated with the 3-category case

Table 14.
Percentage of cases in each disposition category as a function of group (N=227).

	No/refused charges	Dismissed	Verdict entered
O	6	33	60
R	10	29	61
D	13	31	56
NR	4	31	65

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

disposition variable, such that the greater SES Factor Score, the lower the odds of no/refused charges relative to verdict entered (*B*=-.61, *W*=2.54, *OR*=.54). Also, the higher the SES Factor Score, the greater the odds of dismissal compared to verdict entered (*B*=.28, *W*=3.39, *p*=.066, *OR*=1.3). A trend across Groups suggested that the odds of a dismissal versus verdict entered were negatively associated with living with perpetrator at the time of the incident. In fact, living together at the time of the incident reduced the odds of dismissal to court verdict (*B*=-.52, *W*=2.91, *p*=.088, *OR*=.60).

Following up on the finding that living with the offender at the time of the incident was marginally related to the 3-category disposition status variable, we looked closely at women who were living with the offender at T1. Recall that T1 interviews occurred a median of 26 days after the incident.

Table 15.
Of women living with the offender at T1, the percentage whose cases fell in each disposition category as a function of Group (N=37).

% of women in each group:	No Charges/Refused	Dismissed	Verdict Entered
O	0	0	100
R	11	56	33
D	24	18	59
NR	0	50	50

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Continuing to live with the offender may make participating in the criminal justice process particularly difficult. Table 15 details case disposition for women living with the offender at T1 by Group. Of particular note, 100% of women who lived with the offender and received outreach (O) had at least one guilty verdict entered against the offender. Following up on an omnibus chi-square test comparing women who lived with the offender at T1 across all four groups on case disposition status (χ^2 (6)=11.75, *p*=.068), a direct comparison of women in the O and R groups revealed a significant difference (χ^2(2)=7.47, *p*=.02).

Next, we collapsed the 3-category approach further to examine simply whether or not a guilty verdict was entered for at least one charge. Ethnic minority membership was associated with the likelihood of a guilty verdict being entered (χ^2 (1)=5.61, p=.02, Cohen's d =.31). For women not identifying as ethnic minorities, the odds ratio that a guilty verdict was *not* entered (for any reason, such as a dismissal or failure to file or found not guilty) versus that a guilty verdict *was* entered was 1.68. On the other hand, this odds ratio was significantly reduced in women identifying with an ethnic minority group (Risk estimate=.83), indicating greater chance that a guilty verdict was entered in minority women's cases. The odds that a guilty verdict was entered versus not entered were increased for women living with their offender at the time of the incident (*B*=.57, *W*=4.40, *p*=.04)

Finally, we examined the time to case disposition for cases that were filed and closed during the study period for which we had disposition dates (N=214). Groups did not differ in their likelihood of being closed by T1, T2, or T3 (see Table 16 for percentage of cases closed at each time point). Nor did Groups differ on the number of days from the incident report to case disposition (F(3,210)=.02, p=.996): O (*Mean*: 99.79; *SD*: 97.86), R (*Mean*: 97.64; *SD*: 97.99), D (*Mean*: 101.93; *SD*: 120.28), NR (*Mean*: 102.28; *SD*: 106.92).

Table 16.
Percentage of women by groups whose cases were closed at each interview.

% of women in each group:	T1	T2	T3
O	21	91	100
R	26	89	100
D	38	98	100
NR	38	98	98

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Procedural Justice.

Women who testified in court (n=32) were asked to rate how much they were treated with respect and dignity on a scale of 1 (very much) to 4 (not at all). Average scores (*SD*) reported by

group were: O=2.00 (1.04); R=2.00 (1.31); D=2.57 (1.27); NR=1.60 (.55). Groups did not differ in their ratings of the extent to which they were treated with respect and dignity if they testified in court ($F(3,28)=.79$, $p=.51$).

Due to the small sample size, we did not test moderators. However, given past reports that ethnic minority women do report experiences of bias in the courts (e.g., Lichtenstein & Johnson, 2009), we examined ethnic minority status in relation to perceptions of how women were treated by the court. Of the 32 women who testified, 25 identified with one or more ethnic minority groups. Ethnic minority (*Mean*: 2.12; *SD*: 1.13) and majority (*Mean*: 1.86; *SD*: 1.07) women did not differ in the degree to which they perceived being treated with respect and dignity in court ($t(30)=-.55$, $p=.59$, Cohen's $d=.18$).

Psychological and Social Outcomes

Next we present analyses related to the effects of groups on psychological and social variables. Several differences between O and R groups were documented longitudinally. Significant moderators of group effects are described.

PTSD total Symptoms. Descriptive statistics for PTSD symptom severity scores appear in Table 17.

Table 17.
Descriptive statistics for PTSD symptom severity scores by Group and time point.

		N	*Mean*	*SD*
T1	O	78	18.44	13.22
	R	48	19.98	11.75
	D	52	13.10	10.07
	NR	52	14.17	11.51
	Total	230	16.59	12.12
T2	O	67	14.07	11.82
	R	37	11.81	9.04
	D	42	11.38	12.81
	NR	38	13.32	11.83
	Total	184	12.85	11.52
T3	O	65	13.88	11.65
	R	39	15.77	10.90
	D	43	10.58	11.70
	NR	40	11.00	10.81
	Total	187	12.90	11.42

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Analyses revealed significant quadratic ($F(3,369)=3.24$, $p=.02$), linear ($F(3,371)=3.37$, $p=.02$) and main ($F(3,429)=4.73$, $p=.003$) effects for Group on PTSD symptoms (see Figure 2 for

estimated means). Within group analysis of change indicated that PTSD symptom severity scores decreased significantly for O ($t(369)=3.35$, $p=.0009$) and R ($t(378)=4.52$, $p<.0001$) from T1 to T2. As illustrated in Figure 2, a trend suggested that symptom change T1 to T2 was greater among women in the R group compared to the O group ($t(375)=-1.60$, $p=.11$). However, from T2 to T3, symptom severity was stable among women in the O group, but increased for the R group ($t(364)=-2.13$, $p=.03$). As such, we observed significant differences between O and R in symptom change T2 to T3 ($t(363)=2.19$, $p=.03$).

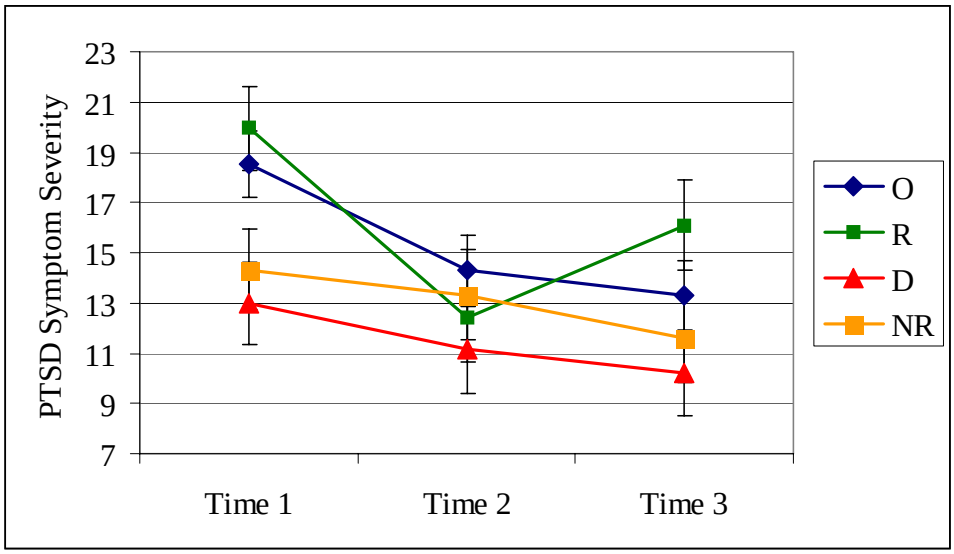


Figure 2. Estimated means (with standard error bars) for PTSD symptom severity by Time and Group.

Analysis of between group contrasts indicated lower PSTD total symptom severity scores for women in the D and NR groups relative to women in the O and R groups (T1: *p*'s<.05). No group differences were observed at T2. At T3; women in the D ($p=.02$) and NR ($p=.07$) groups reported lower levels of PTSD symptom severity than women in the R group. This pattern reflects increases in PTSD symptoms in women in the R group from T2 to T3. Table 18 details within group effect sizes.

Table 18.
Within group effect size change in PTSD symptom severity.

Group	T1 to T2	T2 to T3	T1 to T3
O	.35	.09	.44
R	.61	-.30	.32

Note: O=assigned to outreach; R=assigned to referral.

We also examined potential moderators of Group effects on PTSD symptom severity scores (Global SES Factor, economic and physical dependence on the offender, living with the offender at the incident, having children at T1). Only having children at T1 emerged as a significant moderator. In particular, having children at T1 showed a trend of moderating the quadratic effects of Group over time (p=.053), as well as significant linear (p=.049) and main effects (p=.049).

Looking at symptom change T1-T2, for individuals with children, there was significant decrease in symptoms for both O (t(353)=2.55, p=.01) and R (t(370)=4.68, p<.0001) with significantly greatest decrease seen in O compared to R (t(365)=2.41, p=.02). For individuals without children, only the outreach group showed significant decrease in PTSD symptoms T1-T2 (t(366)=2.94, p=.004). Looking at change from T1-T3, both individuals with and without children showed a decrease in symptoms in the outreach group (t(355)=3.30, p=.001; t(366)=3.12, p=.002). Individuals with and without children in the Referral group also showed continued decreases in symptoms (t(368)=1.67, p=.095; t(345)=2.21, p=.03, respectively). Table 19 contains the symptom effect size change in O and R groups.

Table 19.
Effect Size of symptom change in O and R.

Group	Children	T1 to T2	T2 to T3	T1 to T3
O	yes	.26	.08	.34
	no	.31	.02	.33
R	yes	.64	-.40	.23
	no	.18	.10	.28

Note: O=assigned to outreach; R=assigned to referral.

Examining the between group contrasts at each time point, individuals without children at T1 report significantly higher PTSD symptom severity in the O group relative to the D (p=.08) or NR groups (p=.04). No other between group differences was detected. Among women with children at T1, women in the R group reported greater PTSD symptom severity scores at T1 compared to women in the D (p=.002) or NR (p=.03) groups; women in the O group reported higher PTSD symptom severity scores than women in the D group (p=.02). At T3, greater PTSD scores were still observed for R versus NR (p=.07) and D (p=.03) groups. See Figure 3.

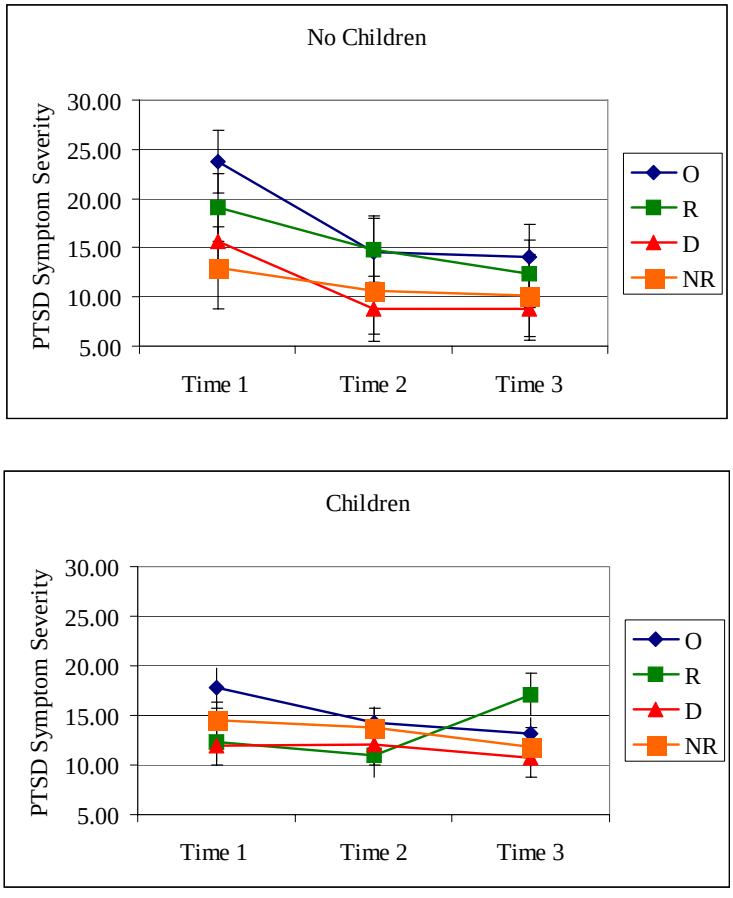


Figure 3. Moderating effect of having children on PTSD illustrated with estimated means and standard error bars.

Depression Symptoms. Descriptive statistics for depression scores appear in Table 20.

Analyses revealed significant quadratic ($F(3,366)=2.98$, $p=.03$), linear ($F(3,368)=2.90$, $p=.04$), and main ($F(3,430)=3.48$, $p=.02$) effects for group on depressive symptoms. Within group analysis of change indicated that depression symptoms decreased significantly for O ($t(365)=2.22$, $p=.03$) and R ($t(374)=3.91$, $p<.001$) groups from T1 to T2. As illustrated in Figure 4, symptom change from T1 to T2 appeared to be greater in the R group compared to the O group ($t(374)=-1.83$, $p=.07$). From T2 to T3, women in the O group showed a trend for continued improvement ($t(356)=1.55$, $p=.12$) while women in the R group appeared to worsen ($t(365)=-1.56$, $p=.12$). As such, symptom change between O and R was significantly different from T1 to T3 ($t(361)=2.18$, $p=.03$).

Table 20. Descriptive statistics for depression scores by Group and time point.

		N	*Mean*	*SD*
T1	O	74	14.82	9.94
	R	46	16.63	9.13
	D	51	11.94	9.16
	NR	52	12.02	9.35
	Total	223	13.88	9.59
T2	O	70	12.87	9.88
	R	37	10.03	9.79
	D	43	10.26	9.74
	NR	38	11.58	9.81
	Total	188	11.45	9.81
T3	O	65	11.43	9.23
	R	37	13.27	8.79
	D	41	11.32	10.91
	NR	38	8.74	8.24
	Total	181	11.22	9.40

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

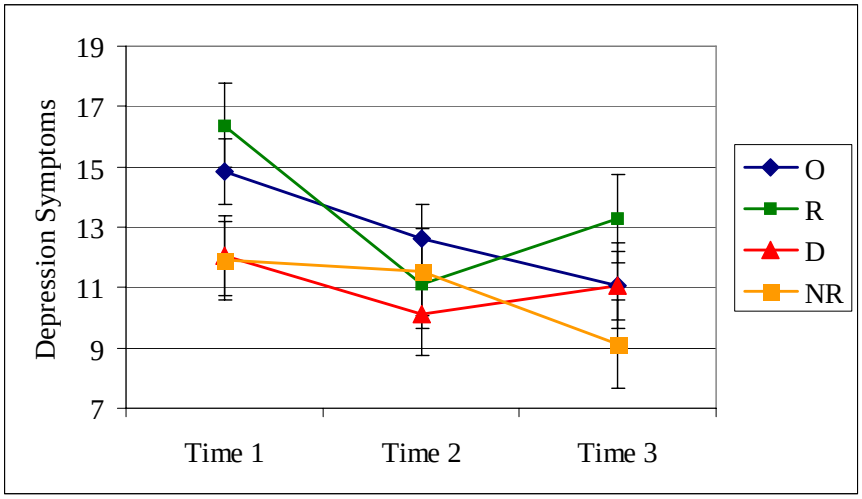


Figure 4. Estimated means (with standard error bars) for depression symptoms by Time and Group.

We tested the between group contrast at the different time points. At T1, women in the D (p=.03) and NR (p=.02) groups reported fewer depressive symptoms than the R group. In addition at T1, a trend suggested that women in the D (p=.11) and NR (p=.09) groups reported fewer depressive symptoms than women in the O group. No differences were observed at T2. At T3, women in the NR group reported fewer depressive symptoms than women in the R group (p=.05). Table 21 details the within group effect size change in BDI symptom scores.

Table 21.
Within group effect size change in BDI symptom scores.

Group	T1-T2	T2-T3	T1-T3
O	.22	.33	.38
R	.46	-.19	.27

Note: O=assigned to outreach; R=assigned to referral.

Fear. Descriptive statistics for reports of fear appear in Table 22.

Analyses revealed significant quadratic [F(3,362)=3.61, p=.013], linear[F(3,364)=4.17, p=.006], and main [F(1,365)=14.81,p=.0001] effect of Group on fear symptoms. See Figure 5. Within group analysis of change indicated significant decreases from T1 to T2 in O and R groups (p<.0001); however, no differences were observed in this change between O and R. Looking at fear symptom change from T2 to T3, there was a trend for continued reduction in symptoms for the O group (p=.07) concurrent with increased fear in the R group (p=.11) resulting in differences between O and R for fear symptom change T2 to T3 (p=.07). Examining symptom

Table 22.
Descriptive statistics for reports of fear by Group and time point.

		N	*Mean*	*SD*
T1	O	73	2.68	1.31
	R	45	2.55	1.07
	D	50	1.82	0.89
	NR	52	1.97	0.99
	Total	220	2.29	1.15
T2	O	67	2.03	1.02
	R	37	1.80	0.69
	D	42	1.64	0.80
	NR	38	1.87	0.86
	Total	184	1.86	0.88
T3	O	65	1.88	0.95
	R	38	2.03	0.87
	D	43	1.62	0.74
	NR	39	1.63	0.72
	Total	185	1.80	0.85

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

change from T1 to T3, significant decreases were seen for O and R. However, due to the reinstatement of some symptoms for R group from T2 to T3, O achieved greater reductions in fear symptoms than R from T1 to T3. Between-group comparisons at T1 indicated greater fear symptom for O compared to the D (p<.0001) and NR (p<.0001) groups; and R compared to NR (p<.0002) and D (p<.003) groups. At T2, the O group reported greater symptoms than the D group (p=.03). At T3, only R group had more symptoms than D (p=.04) and NR (p=.06). Table 23 contains the within group effect size change of TAQ fear scores.

Table 23.
Within group effect size change in fear scores.

Group	T1-T2	T2-T3	T1-T3
O	.66	.22	.86
R	.83	-.23	.56

Note: O=assigned to outreach; R=assigned to referral.

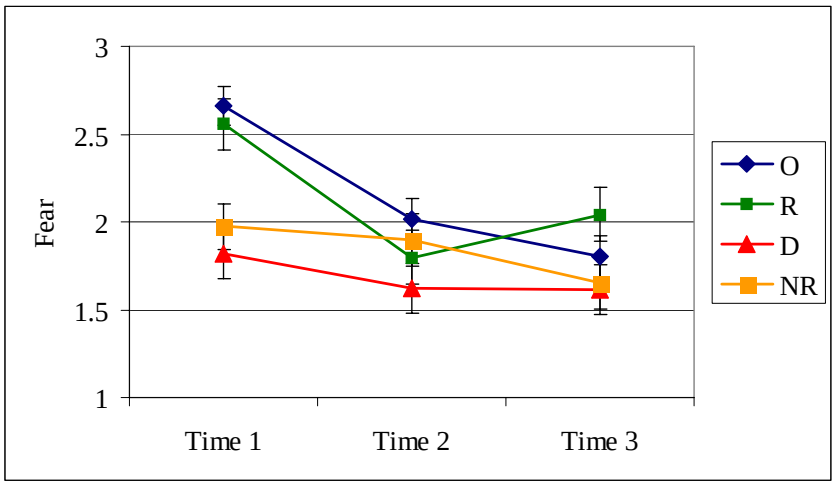
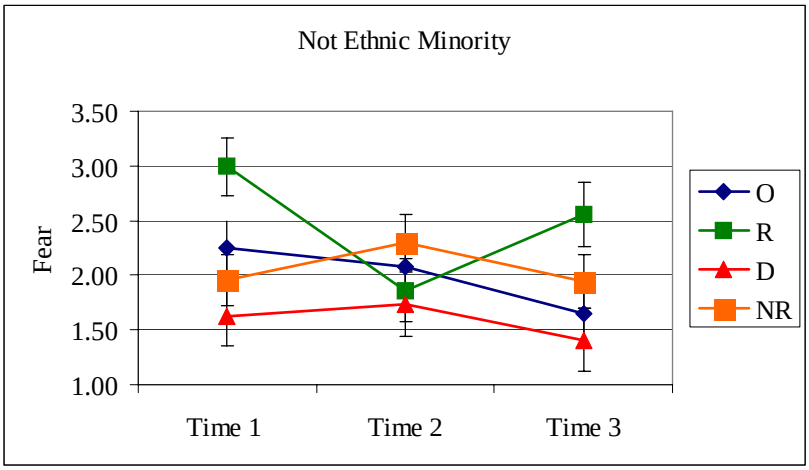


Figure 5. Estimated means (with standard error bars) for fear by Group.

We also examined potential moderators of Group effects on TAQ fear scores. First, ethnicity was examined for its moderating effects on the condition effects observed on fear symptoms (see Figure 6). Ethnicity significantly moderated the quadratic [F(3,355)=2.91,p=.0348)], linear [F(3,359)=3.03,p=.0295), and main effects [F(3,405)=3.84,p=.0098] of group on TAQ fear scores. Examining within group symptom

change T1-T2, for individuals identifying as ethnic minorities, there was significant decrease in symptoms for both O ($t(360)=6.12$ $p<.0001$) and R ($t(363)=3.53$, $p=.0005$) groups. No difference in symptom change was observed when comparing O to R. For individuals not identifying as ethnic minority, only the R group showed significant decrease in PTSD symptoms T1- T2 [$t(365)=4.05$,$p<.0001$. As such, greater symptom reduction was seen for R compared to O ($t(368)=-2.56$, $p=.01$). Looking at change from T1-T3, for individuals identifying as an ethnic minority only O group demonstrated significant improvement in symptoms ($t(374)=2.40$, $p=.02$) with trends for improvement seen in R ($t(365)=1.56$, $p=.12$). On the other hand, for individuals not identifying as ethnic minority, significant decreases were observed in O ($t(358)=7.31$, $p<.0001$) and R ($t(368)=3.06$, $p=.002$) with a trend for greater decreases in the O group ($t(364)=1.86$, $p=.06$). Table 24 contains the within group effect size change of fear moderated by ethnicity.



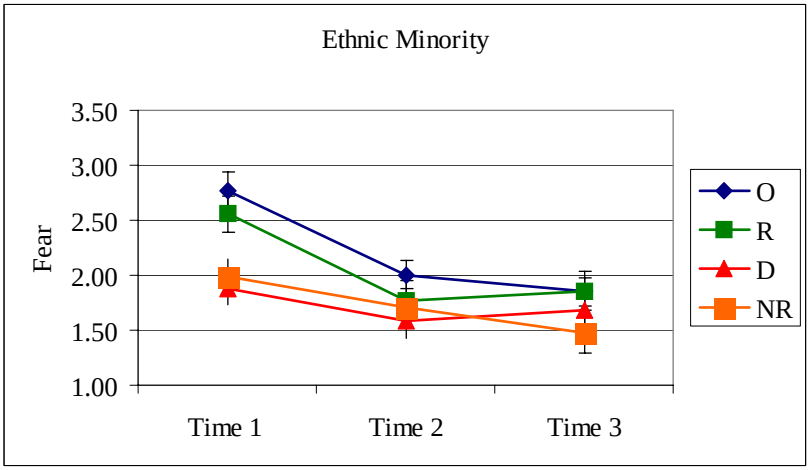


Figure 6. Moderating effect of ethnic minority status on fear, illustrated with estimated means and standard error bars.

Table 24.
Effect Size of change in fear moderated by ethnic minority status.

Group	Ethnic Minority	T1-T2	T2-T3	T1-T3
O:	yes	.67	.13	.80
	no	.09	.19	.28
R:	yes	.50	-.07	.42
	no	.58	-.34	.22

Note: O=assigned to outreach; R=assigned to referral.

Next we examined between-group contrast for each level of the moderator variable. In individual identifying as members of an ethnic minority at T1, fear scores were greater in R compared to D,NR, and O (p=.0003, p=.003, and p=.04 respectively). Also there was a trend for O having greater scores than D. We did not have power to detect differences between groups at T2 in individuals who were not identified as an ethnic minority. At T3, fear scores were greater in D and O groups compared to R (p=.006, p=.02 respectively). For individuals identifying with an ethnic minority group, significant differences were observed for D compared to O (p<.0001) and R (p=.03) as well as NR compared to O (p=.0001). Also trends were observed for differences between R compared to NR (p=.09) and O (p=.06). At T2, women in the O group differed from the D group (p=.047) and there was a trend for women in the O group to score higher than women in the NR group (p=.096). At T3, there was a trend for women in the O group to report higher fear than women in the NR group (p=.096).

We also looked at women's perceptions of physical dependence on the offender. Perceptions of physical dependence on the offender moderated linear (F(3,319)=3.95, p=.02) and main effects (F(3,357)=5.14, p=.002) of Group on fear scores, with a trend for moderating effects on the quadratic effect of condition on fear scores (F(3,318)=2.44, p=.06). For high levels of physical dependence, defined by the mean score plus 2 standard errors, significant differences were observed for O compared to D (p=.002) and NR (p=.006) and R compared to D (p=.002)

and NR (p=.055) at T1. These differences were also significant for average and low levels of perceptions of physical dependence on him. Also, at T2, the O group compared to D group was significantly different for all the levels of the moderator (p's<.05). Finally At T3, the R group had higher fear scores than the D (p=.07) and NR groups (p=.04). For average and low dependence only trends were observed at p's<.06. Table 25 contains the within group effect sizes for change in fear symptoms moderated by dependence on him. Between group analyses indicated no differences for the moderator by level of dependence on him.

Table 25.
Effect Size within group change in fear scores in O and R groups moderated by perceptions of physical dependence on him.

Group	Physical Dependence on Him	T1-T2	T2-T3	T1-T3
O	High (1.58)	.27	.20	.48
	Average (1.42)	.40	.20	.63
	Low (1.28)	.51	.20	.71
R	High (1.58)	.62	-.18	44
	Average (1.42)	.64	-.19	.46
	Low (1.28)	.65	-.19	.47

Note: O=assigned to outreach; R=assigned to referral.

Social Support. We examined two measures of social support (see Table 26). ISEL scores did not differ by Group over Time. In addition, we found no group differences in T3 ratings of satisfaction with the quality of different forms of social support received over the previous year (e.g., emotional support, tangible support).

Table 26.
ISEL scores by Group and Time.

	T1 ISEL			T2 ISEL			T3 ISEL			T3 Satisfaction		
	N	*Mean*	*SD*	N	*Mean*	*SD*	N	*Mean*	*SD*	N	*Mean*	*SD*
O	76	2.09	.61	64	2.09	.59	66	2.09	.61	64	2.65	1.18
R	44	2.06	.55	37	2.26	.50	38	2.12	.52	37	2.49	.87
D	53	1.99	.64	42	2.06	.66	43	2.05	.58	39	2.49	.93
NR	51	2.11	.59	38	2.13	.58	40	2.28	.49	39	2.41	.81

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. ISEL: range 0-3; high scores better. T3 Satisfaction: range 1-7; low scores better.

Revictimization by Target Offender and New Partners. We examined several forms of revictimization, including the presence of continued psychological or physical aggression by the target offender as well as psychological or physical aggression by a new partner at T2 or T3. In addition, we examined stalking and sexual aggression by the target offender or a new partner at T2 or T3. Aggression was considered present if women reported one tactic within each category at either T2 *or* T3. The experience of revictimization by the original offender or a new partner was unfortunately common (see Table 27); however, we detected no differences by groups.

Table 27.
Percentage of women by group who report additional aggression at T2 or T3.

% of women in each group:	Aggression by Target Offender				Aggression by New Partner			
	Psycho-logical	Physical	Sexual	Stalking	Psycho-logical	Physical	Sexual	Stalking
O	75	30	32	75	24	15	8	15
R	81	29	26	74	24	10	7	12
D	83	27	27	60	23	2	2	6
NR	79	44	30	60	31	12	14	16

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

At T2 and T3, we asked women what proportion of new incidents they reported to law enforcement (1=all; 2=most; 3=some; 4=none). See Table 28 for average reports by Group. The groups did not differ in their likelihood of contacting law enforcement related to new incidents at T2 ($F(3,73)=.95$, $p=.42$) or T3 ($F(3, 63)=.60$, $p=.62$)

Table 28.
Proportion of new incidents reported to law enforcement at each time point.

		N	*Mean*	*SD*
T2	O	24	3.33	1.01
	R	16	3.06	1.29
	D	16	3.69	0.48
	NR	18	3.28	1.27
T3	O	26	3.65	0.69
	R	12	3.33	1.15
	D	17	3.71	0.77
	NR	12	3.42	1.16

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. Proportion of new incidents reported: 1=all; 2=most; 3=some; 4=none.

Relationship Status. To characterize women's plans for staying/leaving relationships with the offender from the target incident, we examined Stages of Change (SOC) scores at T3. We predicted that women in the O group would show higher SOC change relative to women in the R group. Data analysis supported this prediction: Compared to women in the R group (*Mean*: 3.43; *SD*: 1.86), women assigned to the O group (*Mean*: 4.15; *SD*: 1.25) had higher SOC scores at T3 (equal variances not assumed: $t(56.60)=2.07$, $p=.04$). Higher scores indicate greater likelihood of having left the relationship. The effect size was medium (Cohen's $d=.49$).

Service Utilization. We first examined how many women in each Group had contact with any of the Triage Review Team partner agencies at each time point (see Table 29). The groups differed significantly at each time point: T1 (χ^2 (3)=20.64, $p<.001$); T2 (χ^2 (3)=11.09, $p=.01$); T3 (χ^2 (3)=10.80, $p=.01$). The difference appeared to be due to differences between the O and R groups and the D and NR groups. Indeed, at each time point, women in O and R groups were more likely to report contact with one of the Triage Review Team partner agencies than women in the D and NR groups: T1 (χ^2 (1)=18.88, $p<.001$); T2 (χ^2 (1)=10.06, $p=.002$); T3 (χ^2 (1)=9.34, $p=.002$).

Table 29.
Percentage of women at each interview who reported contact with at least on Triage Review Team partner agency.

	T1	T2	T3
O	48	32	19
R	38	37	13
D	13	10	0
NR	20	18	5

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Service Utilization and Specificity of Outcomes. Next, we examined service use patterns for the two Triage Review Team partner agencies most frequently contacted over the study period (SafeHouse Denver and Project Safeguard). Of the 232 women who reported on service usage during the study, 57 indicated that they had been in contact with SafeHouse Denver; 67 indicated that they had been in contact with Project Safeguard. (Only 2 women reported contact

with AMEND and 4 with the Denver Domestic Violence Coordinating Council.) As illustrated in Table 30, the likelihood of being in contact with these agencies varied by the four groups (SafeHouse Denver: $X^2(3)=15.02$, $p=.002$; Project Safeguard: $X^2(3)=22.49$, $p<.001$). This effect appeared to be due to the fact that women in the O and R groups were more likely overall than women in the R and D groups to have contact with community-based agencies (SafeHouse Denver: $X^2(1)=14.13$, $p<.001$; Project Safeguard: $X^2(1)=21.35$, $p<.001$).

Table 30.
Women's reports of community-based agency contact across the study period (N=232).

	SafeHouse Denver		Project Safeguard	
% of women in each group:	No Contact	Contact	No Contact	Contact
O	65	35	56	44
R	67	33	63	37
D	91	9	89	11
NR	83	17	83	17

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

SafeHouse Denver and Project Safeguard provide different types of services. In particular, SafeHouse Denver provides counseling and shelter services; Project Safeguard provides legal advocacy. We examined whether contact with these agencies related to service-relevant outcomes. Though contact with neither agency increased the likelihood that a woman went to court, women who had contact with Project Safeguard during the study period (versus those who did not) were more likely to report higher levels of cooperation ($X^2(2)=7.45$, $p=.02$); however, contact with SafeHouse Denver was unrelated to cooperation ($X^2(2)=1.34$, $p=.51$). See Table 31. Contact with Project Safeguard was also marginally associated with higher Stages of Change (SOC) scores at T3; however, contact with SafeHouse Denver was not ($t(175)=.44$, $p=.66$). In particular, women who had contact with Project Safeguard during the study period (n=56; *Mean*: 4.14; *SD*: 1.30) reported higher SOC scores than women who did not have contact

with Project Safeguard ((n=121; *Mean*: 3.69; *SD*: 1.69), t(136.72)=1.97, p=.05, unequal variances assumed; Cohen's *d*=.38).

Table 31.
Women's reports of cooperation at T3 in relation to whether or not they had contact with Project Safeguard during the study period.

% of women Contact with Project Safeguard	"I did everything the prosecuting attorney office has asked"	"I have done some, but not all of the things the prosecuting attorney asked me to do"	No, I have not done anything the prosecuting attorney asked"
No	58	21	21
Yes	80	12	8

In terms of IPV-relevant distress (see Table 32), women who reported contact with SafeHouse Denver (compared to those who did not) during the study period also reported higher levels of PTSD (*t*(185)=3.44, *p*=.001, Cohen's *d*=.74) and depression symptoms (*t*(179)=2.92, *p*=.004, Cohen's *d*=.62) as well as fear (*t*(183)=2.69, *p*=.008, Cohen's *d*=.60) at T3. However, women who had contact with Project Safeguard (versus those who did not) reported only marginally higher levels of PTSD symptoms (*t*(185)=1.96, *p*=.05, Cohen's *d*=.38) and fear (*t*(183=1.98, *p*=.05, Cohen's *d*=.37) at T3 (but not depression symptoms; *t*(179)=.15, *p*=.88); however, the effect sizes were smaller than for women in the SafeHouse comparison. These

Table 32.
Reports of distress at T3 in relation to contact with Triage partner agencies.

	SafeHouse:				Project Safeguard			
	Contact	n	*Mean*	*SD*	Contact	n	*Mean*	*SD*
PTSD Symptom Severity	No	135	11.16	10.72	No	126	11.77	11.26
	Yes	52	17.40	12.05	Yes	61	15.23	11.49
Depression Severity	No	129	9.95	8.89	No	121	11.14	9.37
	Yes	52	14.37	9.95	Yes	60	11.37	9.54
Fear	No	134	1.69	0.84	No	125	1.71	0.80
	Yes	51	2.06	0.84	Yes	60	1.97	0.94

findings suggest that women with greater symptoms were more likely to seek out and/or be referred for counseling than legal advocacy-related services.

Spatial Distribution of Key Factors

Spatial data preparation and selection. In order to examine data in a geographic information system (GIS), we geo-coded two addresses based on where women reported living: 1.) at the time the incident occurred (this was not necessarily the location of the incident); and 2.) during the bulk of the time that their cases were open (this information was collected at T3; referred to as "bulk address"). At T1, some women only reported an intersection rather than a street address. If that was the case, we tried to get clarification of a street address at later interviews. If women did not complete the T3 interview, we used the address where she reported living when the incident occurred for the "bulk" address. We verified all addresses prior to geo-coding. In approximately 8 cases, we corrected addresses when errors were obvious (e.g., address given was not plausible, but reversing the numbers made a plausible address) or used nearby addresses. On 7 occasions, address information seemed bad for T1 (either missing or simply wrong); in such cases, we used the victim's address from the police report. After cleaning address data, we discovered that approximately 35 women lived outside Denver at T1; and 45 women at T3 (these were not necessarily the same women because women moved both in and out of the city during the study period). Geocoding was done for addresses in Denver by matching women's addresses with the geocoded addresses of all Denver addresses available at www.denver.gov. The coordinate system used was the North American Datum 1983, State Plane Colorado Central, Feet. All analyses described below are constrained to addresses in Denver.

Spatial Distribution of Groups. We first examined the spatial distribution of the O, R, D, and NR groups using the bulk address location in Figure 7 (the map was comparable using the

incident address). We saw no particular spatial pattern to the distribution of these groups. That is, women in any one particular group (e.g., NR) did not appear to come from a particular area.

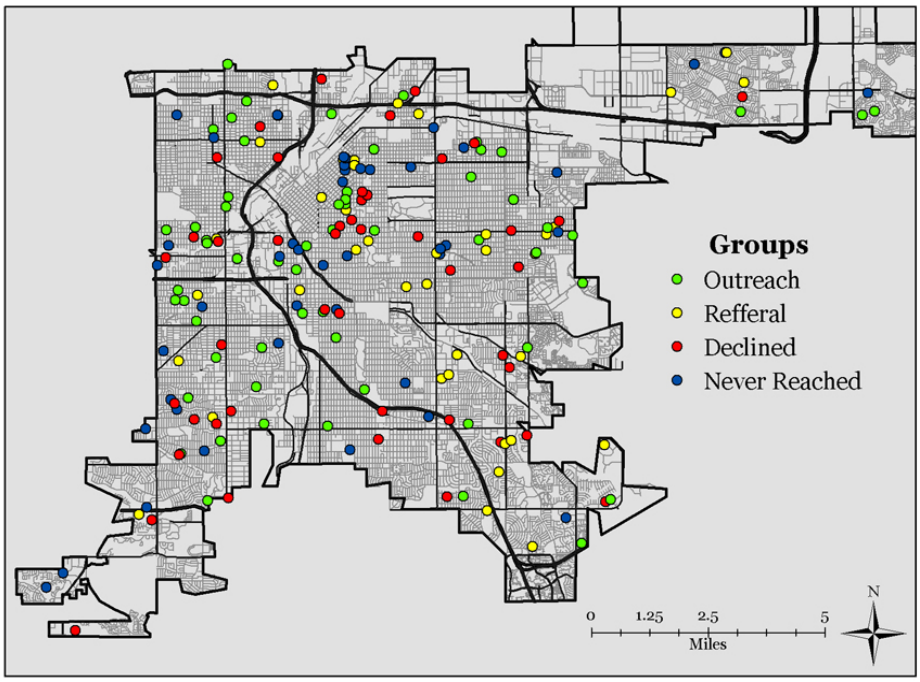


Figure 7. Distribution of women's address (bulk) by Group.

Point Pattern Analysis of Demographic, Case, and Psychological Factors. We were interested in whether key demographic, case, and/or psychological factors had significant spatial characteristics. Thus, we analyzed the spatial pattern of key factors (see Table 33), running three primary analyses on each variable. First, we calculated a Moran's I test to determine if a variable was spatially autocorrelated. Spatial autocorrelation indicates that the distribution of values in the 2D dataset is not independent. Thus, with in autocorrelated dataset, values located close to one another are more similar than values located far away from each other. The Global Moran's I provides an index value (+/- 1= pattern) for which the statistical significance can be tested (Moran, 1950). Second, we examined spatial patterns for localized clustering of values, which can reflect specific neighborhood effects. We used the statistical approach of Getis-Ord Gi or Local Gi (Ord & Getis, 1995). The Local Gi sums values of nearby data points and compares

that value to the total of the global dataset; every data point receives a Z score, and a *p* value. We report clusters when unusually high or low Z scores were detected. Table 33 indicates if clustering is slight, moderate, or substantial for each variable examined. Slight clustering consisted of small pockets of clustering that may not be relevant to larger spatial patterns. Moderate clustering consisted of larger areas that may reflect neighborhood factors. Substantial clustering indicated an important geographic pattern that was relevant to the dataset as a whole. Third, we examined the data for spatial outliers. Spatial outliers were determined using the Anselin Local Moran's I (Anselin, 1995). The Local Moran I test identifies values that are exceptionally high or low given local values. If outliers did not seem relevant to larger spatial patterns, we did not note them.

Table 33.
Summary of spatial characteristics of demographic, case, and psychological variables.

		Autocorrelation	Clustering
Demographic Variables	SES		Slight
	Ethnicity		Substantial
Target Incident Characteristics	Psychological Aggression: Tally	(*i*=1.29; *p*<.001)	Slight
	Physical Aggression: Tally		Moderate
	Injury: Tally		Moderate
	Stalk: Tally		Moderate
T1 Psychological Variables	Depression		Moderate
	Fear		Moderate
	PTSD		Moderate
	Social Support (Sullivan & Bybee)		Substantial
	Social Support (ISEL)		Moderate
Criminal Justice Variables	Contact Agencies	(*i*=1.47; *p*<.001)	Moderate
	Case Disposition*		
	Asked to court*		
	Go to court*		
	Cooperation*		

* indicates categorical variable for which autocorrelation and clustering analyses cannot be calculated.

Using the bulk addresses for 186 participants who lived in Denver at the time the target incident occurred, we first examined SES using the SES Factor Score (*Mean*: -.05; *SD*: .96). See Figure 8. Surprisingly, SES data were not autocorrelated and showed only slight clustering. Two areas of statistically significant clusters of high SES values are shown with red ovals. Outliers tended to be low and dispersed without pattern across Denver.

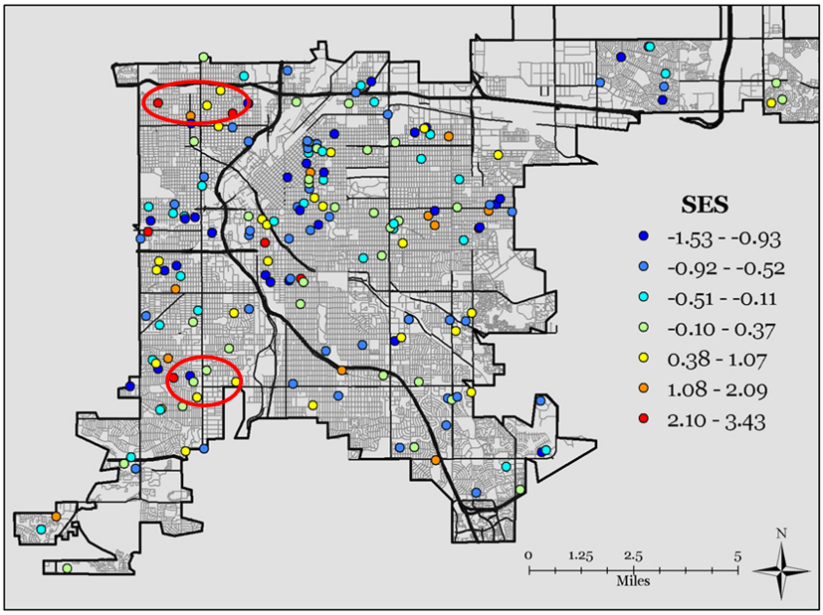


Figure 8. Women's SES Factor scores by address (at time of incident).

Using bulk addresses, we mapped the ethnicity of 201 participants. Figure 9 includes 4 maps for participants who identified as 1.) Hispanic/Latina; 2.) African American; 3.) Caucasian; and 4.) all other identities combined (American Indian, Asian, Pacific Islander, and other). Many participants reported multiple ethnic identities; therefore, one address may appear on several maps. Notably, spatial patterns suggest that Hispanic/Latina women in the sample tended to live to the west of the city; whereas African American women tended to live to the east.

Target Incident Characteristics. To examine characteristics of the target incident spatially, we mapped where women lived at the time of the incident as a function of the tally variables calculated from CTS reports (recall that tally scores reflect the total number of

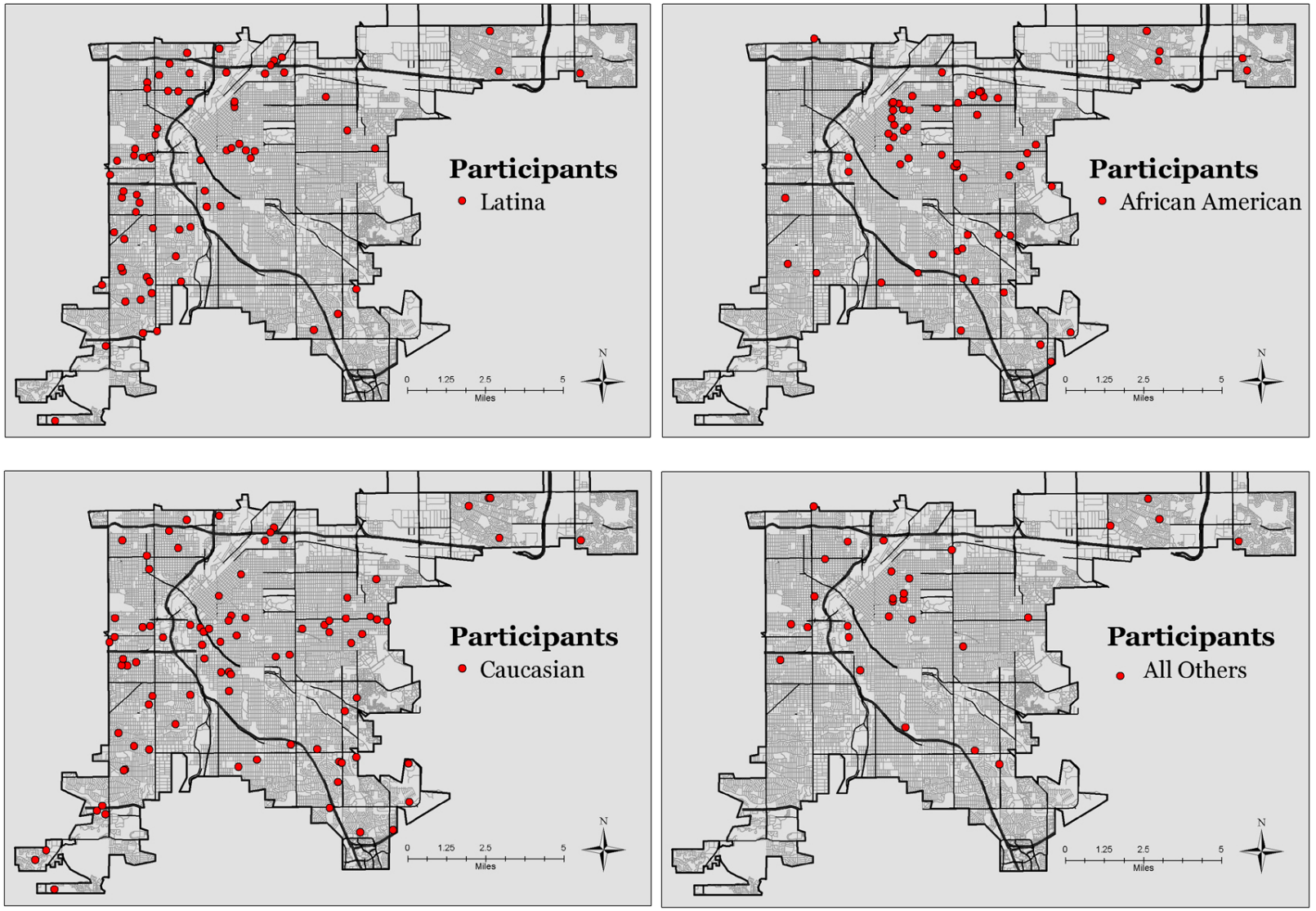


Figure 9. Participant ethnicity by bulk address.

aggressive tactics or injuries reported). These maps evaluate whether women's reports of aggression/injuries have spatial patterns based on where she lived. Using addresses of where women lived at the time of the incident, psychological aggression tally scores (*Mean*: 4; *SD*: 3) were mapped for 195 participants in Denver. The dataset was autocorrelated (i=1.29, p<.001), indicating that the data were clustered and observations were not independent of one another. The Local Gi indicated two small clusters of low data values (see blue circles, Figure 10).

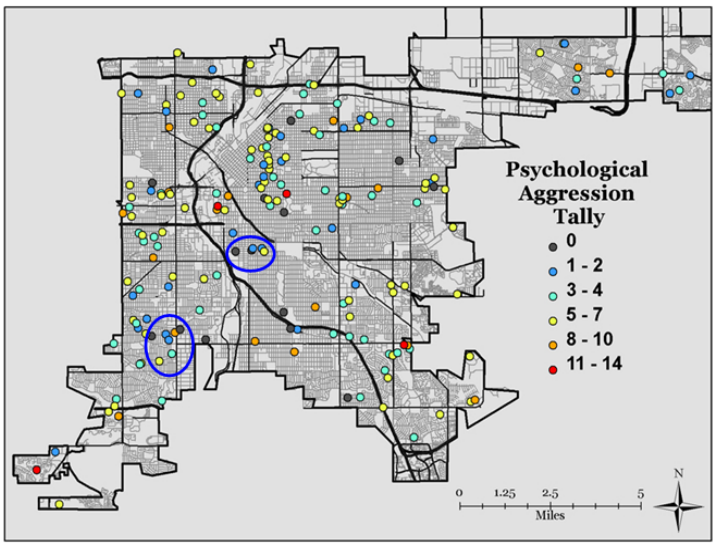


Figure 10. Psychological aggression (tally scores) by address (at time of incident).

Next, we mapped Physical Aggression tally scores for the same 195 participants (*Mean*: 3; *SD*: 3). No autocorrelation was noted. The Getis-Ord Gi test located two clusters of low values, noted in red circles in Figure 11. A dozen statistically significant outliers were spread throughout Denver without a specific spatial pattern.

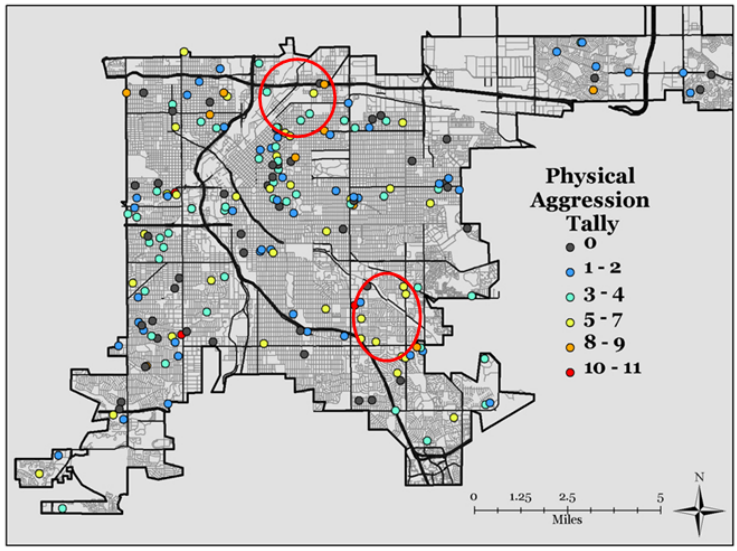


Figure 11. Physical aggression (tally scores) by address (at time of incident).

Figure 12 shows Injury tally scores (*Mean*: 3; *SD*: 3) for the same 195 women. We also noted clusters in the Getis –Ord Gi test; the entire output is shown in Figure 13. Notably, these clusters differ from those identified in the Physical Aggression tally score map (Figure 11).

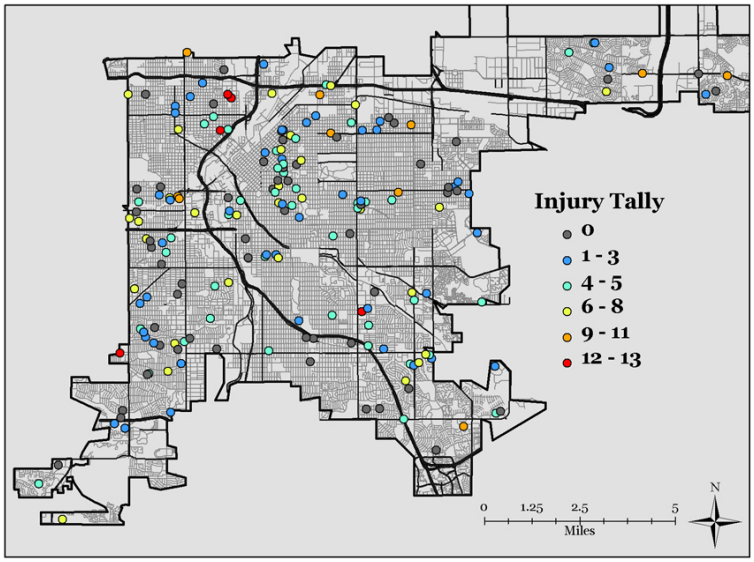


Figure 12. Injuries (tally scores) by address (at time of incident).

Next, we examined women's reports of stalking between the target incident and T1. As with the previous aggression scores, we mapped the total number of stalking behaviors by the offender (*Mean*: 1; *SD*: 2). Among the 195 women living in Denver at the time of the incident, we detected no

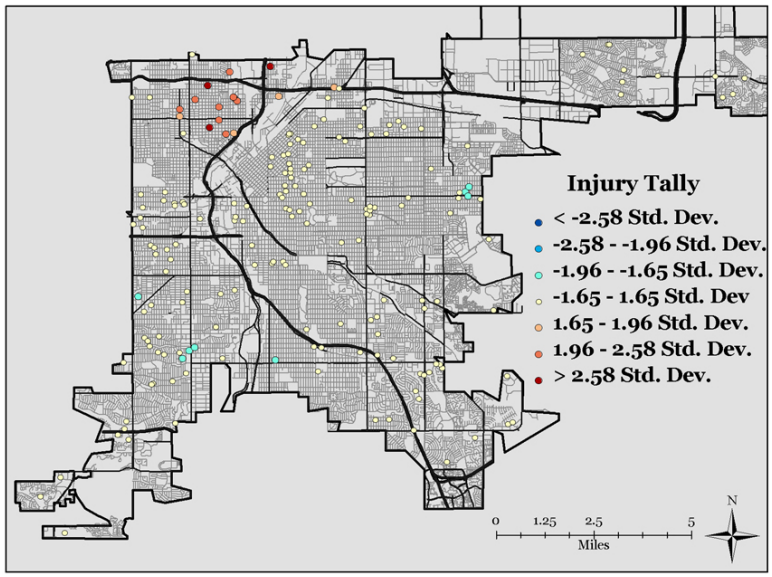


Figure 13. Clusters of injury reports (tally scores) by address (at time of incident).

global pattern to the data. The Local Gi located several high (red circles) and low stalking clusters (blue clusters) shown in Figure 14. Low clusters are associated with the relative absence of stalking activity.

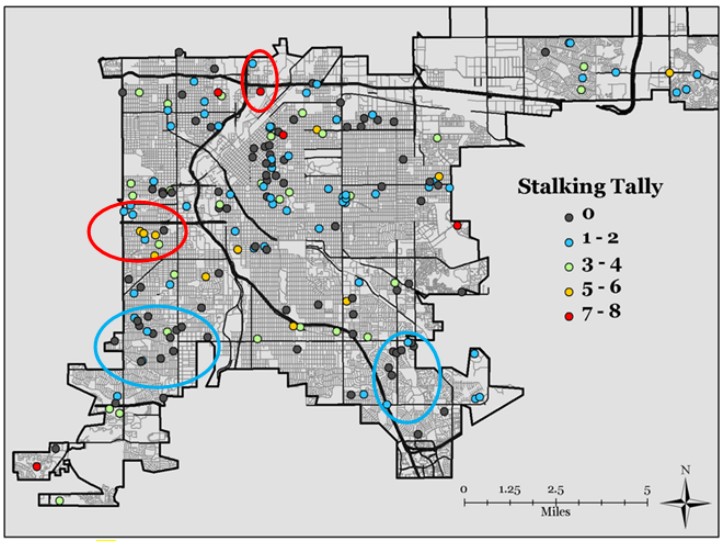


Figure 14. Clusters of stalking reports (tally scores) by address (at time of incident).

Psychological distress. We next examined the spatial distribution of T1 distress in relation to where women lived at the time of the incident. Figure 15 shows the distribution of depression scores for 188 women (*Mean*: 14; *SD*: 12). We noted no global pattern in the data; however, the Local Gi pointed to two significant clusters, highlighted in Figure 15. The red circle indicates a cluster of high depression symptoms; while the blue circle indicates a cluster of low depression symptoms.

Figure 16 shows T1 PTSD symptom severity scores for 195 women living in Denver at the time of the incident (*Mean*: 16; *SD*: 14). As with depressive symptoms, we detected no global pattern in the data; however, two significant clusters are illustrated in blue and red ovals in Figure 16. Notably, these clusters occur in different neighborhoods than the clusters found for depressive symptoms.

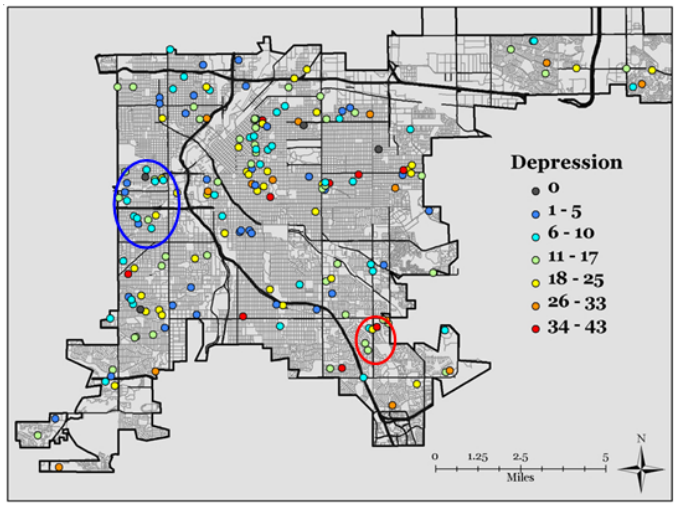


Figure 15. Distribution of depression symptom scores by address (at time of incident).
The red circle indicates a cluster of high scores;
the blue circle indicates a cluster of low scores.

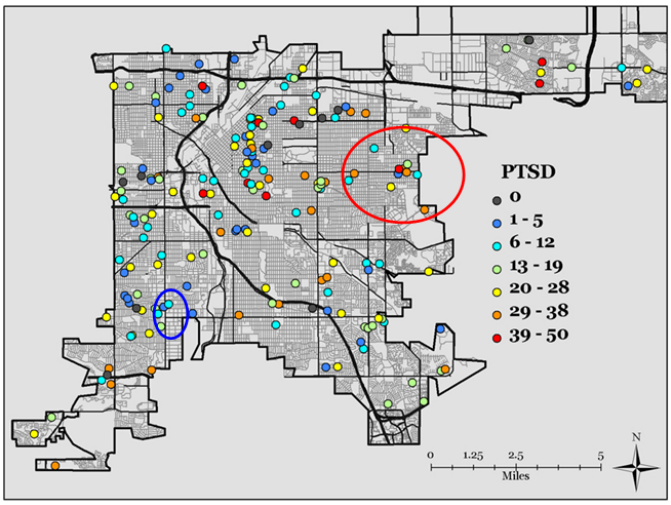


Figure 16. Distribution of PTSD symptom scores by address (at time of incident).
The red circle indicates a cluster of high scores;
the blue circle indicates a cluster of low scores.

Fear. Figure 17 shows the distribution of T1 fear scores for 186 women living in Denver at the time of the incident (*Mean*: 2.24; *SD*: 1.13). That data were not autocorrelated. The Local Gi pointed to three significant clusters as highlighted in Figure 1. The red circle indicates a cluster of high fear scores; while the blue circles indicate clusters of low fear scores.

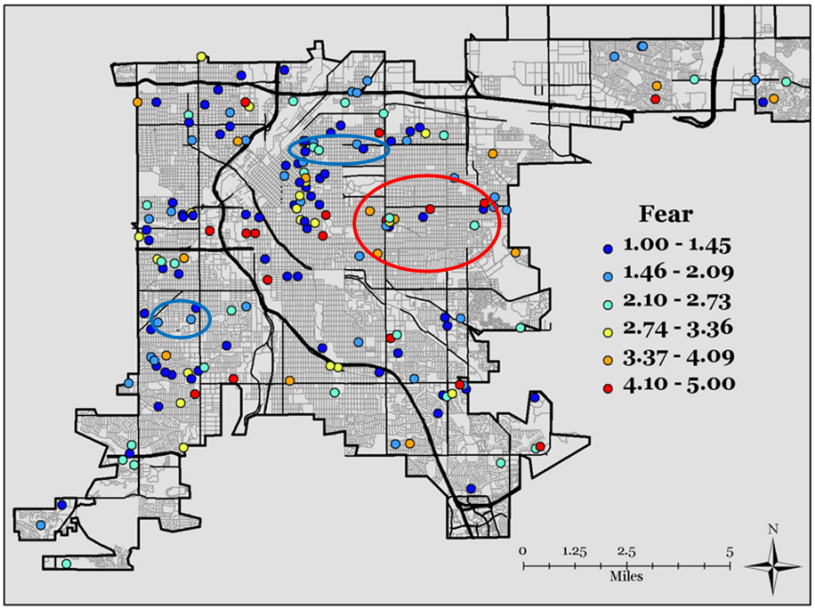


Figure 17. Distribution of fear symptom scores by address (at time of incident). The red circle indicates a cluster of high scores; the blue circle indicates a cluster of low scores.

Social Support. We mapped two social support variables: T3 satisfaction with social support and T1 ISEL scores. Figure 18 shows satisfaction with social support over the last year (*Mean*: 3; *SD*: 1) for 145 participants. We used the bulk address because these data were collected at T3. Satisfaction was not auto correlated; however, data did reveal statistically significant clusters. Figure 19 shows the geographic distribution of those clusters which appear to divide the city east and west.

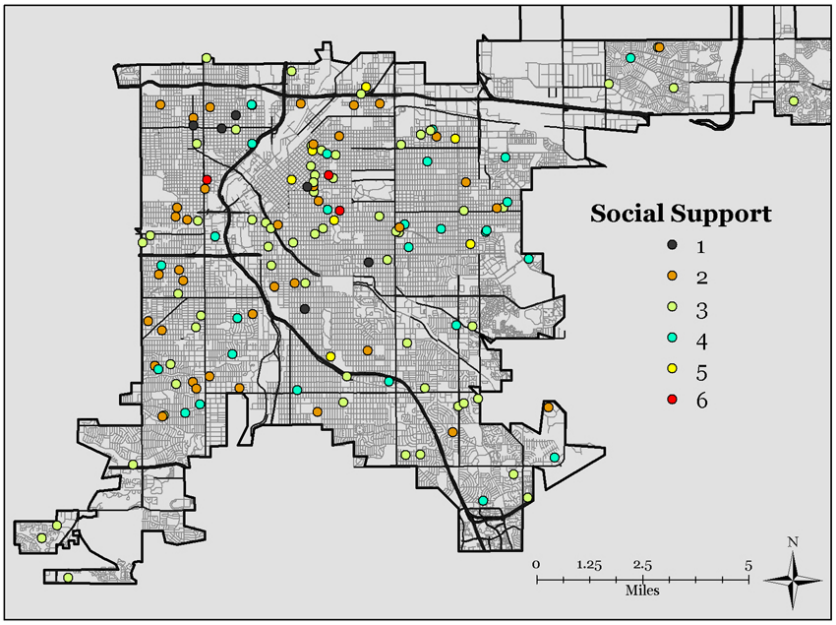


Figure 18. Average satisfaction with social support on a scale of 1 (extremely pleased) to 7 (terrible) reported at T3 by address (bulk).

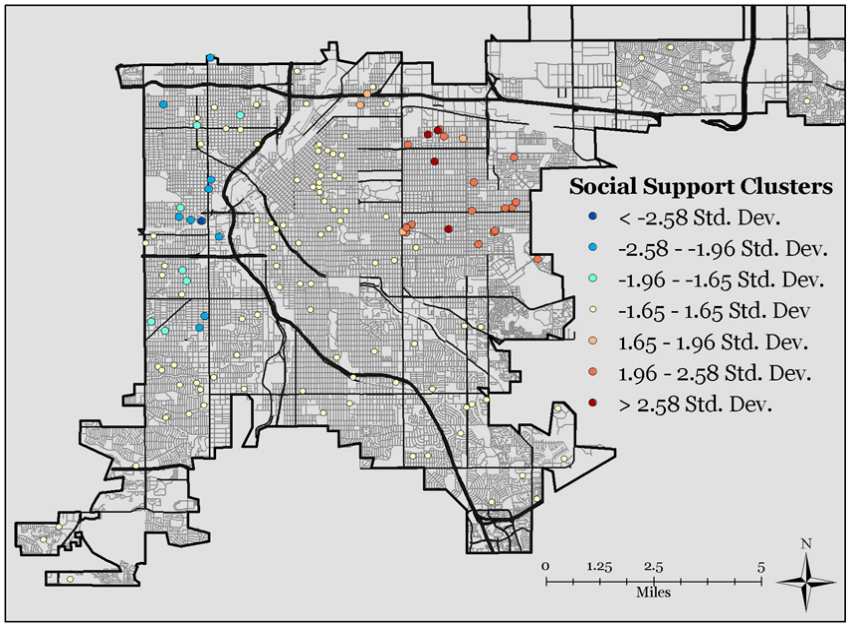


Figure 19. Cluster analysis of average satisfaction with social support

Figure 20 shows T1 ISEL scores (Mean: 2.05; SD: .59) for the 189 women who lived in Denver at the time of the incident. Though we noted no global pattern in the data, two significant clusters are identified in red circles.

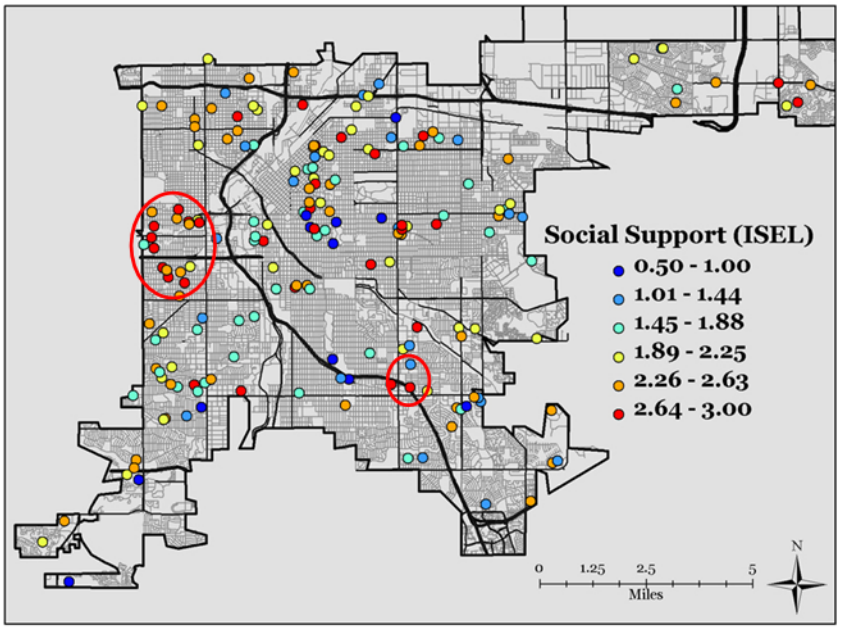


Figure 20. Average satisfaction with social support on a scale of 1 (extremely pleased) to 7 (terrible) reported at T3 by address (bulk).

Contact agencies. In Figure 21, we examined spatially the number of Triage Review Team partner agencies contacted across time points (that is, a sum of the total number of agencies

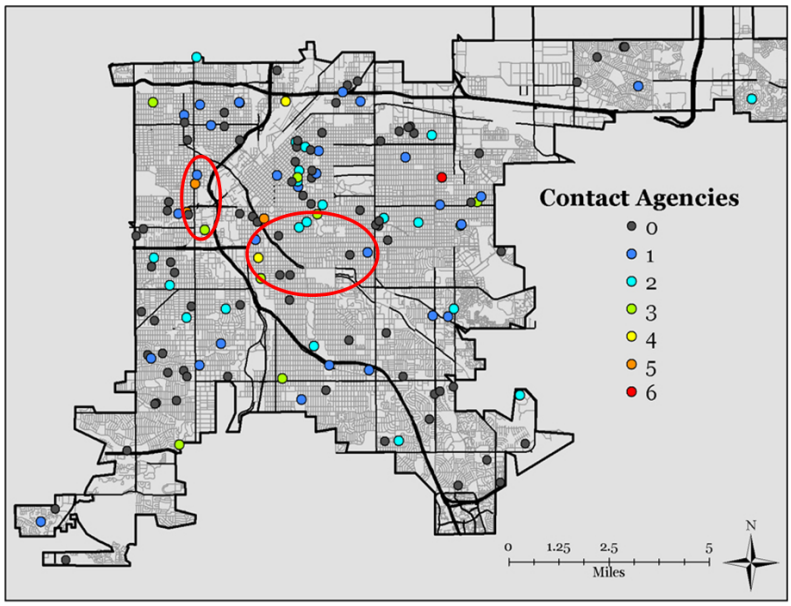


Figure 21. Cumulative contact with local agencies by address (bulk).

women reported being in contact with across time points). If a woman reported contact with Safehouse Denver at T1 and T2, this received a cumulative score of 2. This dataset was strongly autocorrelated, indicating that data points near one another were more similar in value than data points further away from one another. The red circles indicate particularly high clusters, as reflected by the Local Gi statistic.

Criminal Justice Outcomes. Figure 22 maps women's (N=183) case disposition by the following categories: no charges filed (n=6); refused (n=9), dismissed (n=53); not guilty (n=4); and guilty on at least one charge (n=111). Looking at the addresses where women lived the bulk of the time that the case was open, we noticed no spatial pattern to these data.

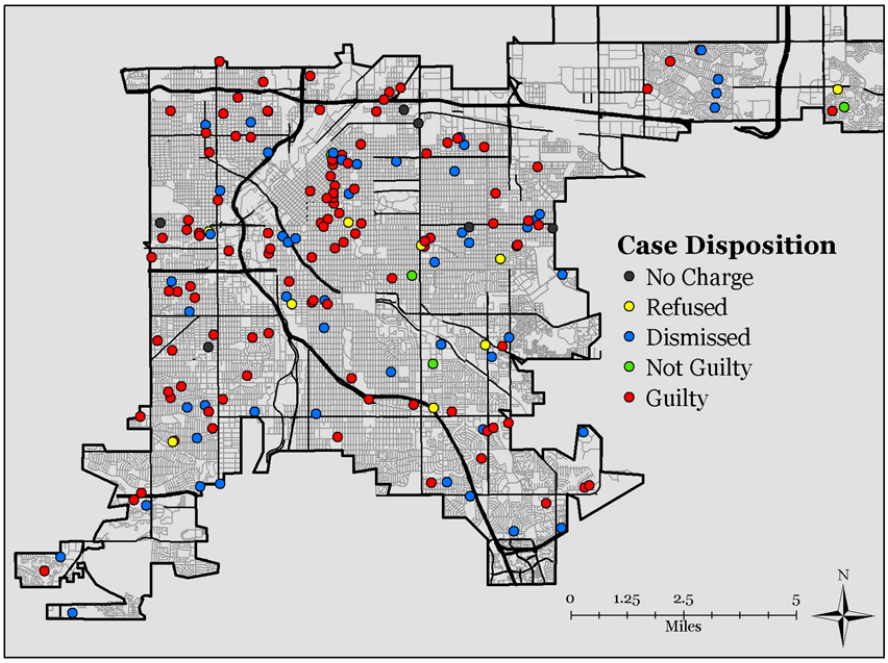


Figure 22. Case disposition by address (bulk).

Of the women who lived in Denver during the bulk of the time that their cases were open, 190 were asked to court. Figure 23 illustrates women's addresses as a function of whether or not she was asked to go to court. Dichotomous variables (e.g., whether or not women were asked to go to court) cannot be used in quantitative spatial statistics to test autorcorrelation or clustering.

Overlaying the SES data on top of this data distribution pointed to a strong correlation between high SES and being asked to attend court. Following up on this pattern, we examined the relationship between SES and being asked to go to court using non-spatial statistics. Indeed, women asked to go to court had significantly higher SES scores than women not asked to go to court ($t(225)=2.58$, $p=.01$, Cohen's $d=.33$).

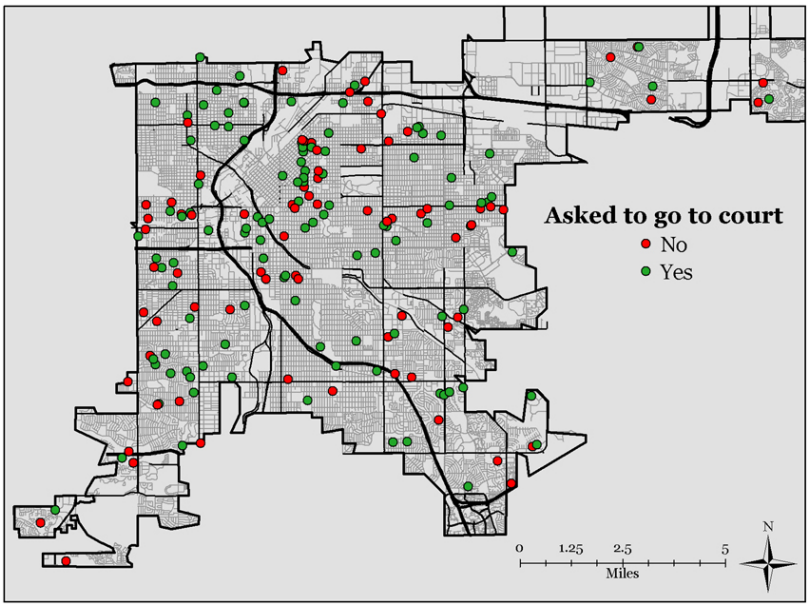


Figure 23. Asked to court by address (bulk)

Of the women asked to go to court, Figure 24 indicates women's bulk addresses. Women who went to court (n=78) appear in green; women who did not go to court (n=30) appear in red.

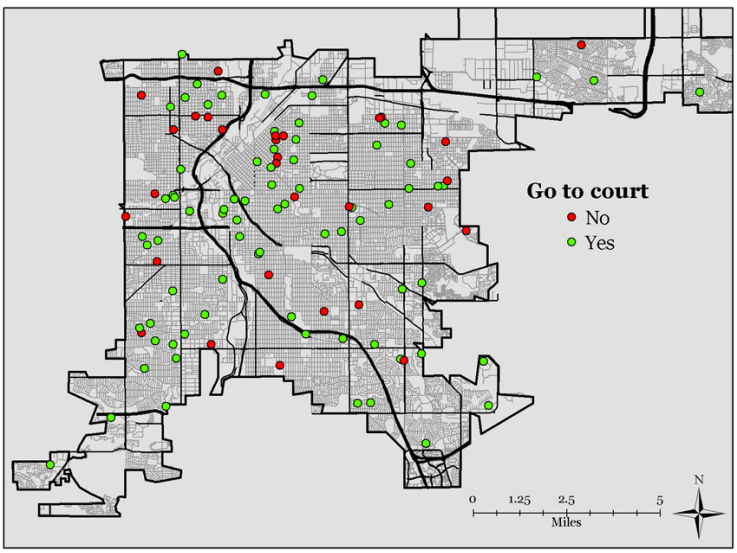


Figure 24. Distribution of participants who attended court by address (bulk).

We asked participants to rate their cooperation. Of the women whose bulk addresses were in Denver, 75 reported that they did everything the prosecutor asked of them; 19 reported that they did almost everything; and 18 reported that they did none of the things requested of them. We found no significant patterns concerning this data distribution; see Figure 25.

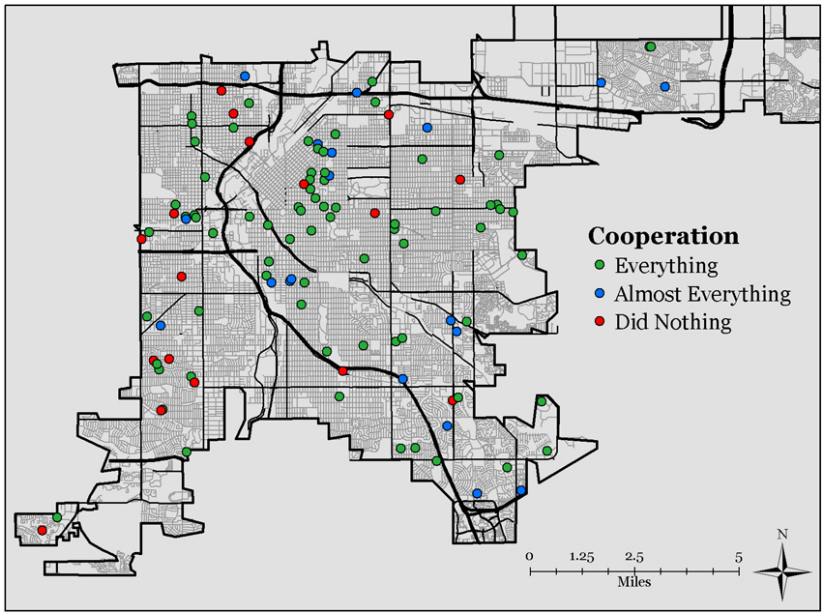


Figure 25. Cooperation by address (bulk).

Ranking Models of case and Psychological Factors

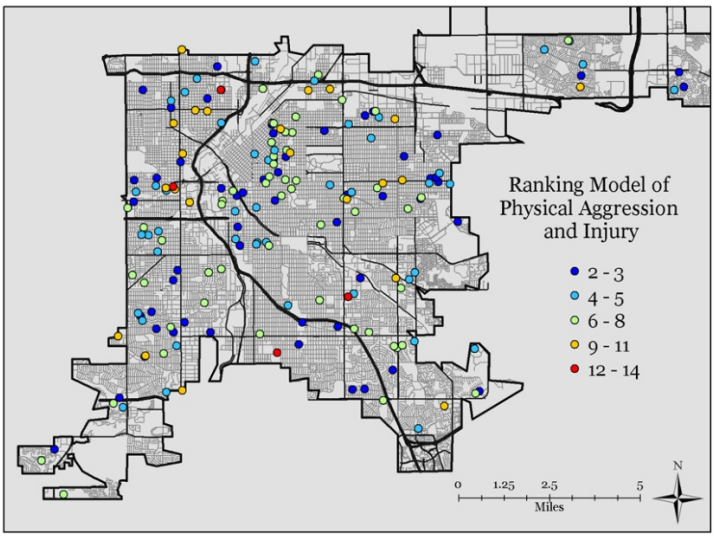
The point patterns described above are easy to map; however, understanding the spatial significance of the maps together is more difficult. Ranking analyses can clarify spatial patterns that are otherwise difficult to discern by simply overlaying one dataset on top of another. Ranking models aggregate multiple variables on a similar scale, ranging from best to worse condition. Then these sums are mapped to show how variables interact and to distinguish clusters of similar patterns. To better understand the current dataset, we used a natural breaks algorithm to rank several variables into classes between 1 (best) and 7 (worst). Next, we summed the class values (and mapped the sums) as a means of evaluating whether conditions (e.g., best, worst) were spatially clustered.

We looked first at ranking models of the target incident tally variables (see Figure 26). Panel A illustrates a ranking model that combines physical aggression and injury ranking class scores, such that higher scores indicate greater combinations of aggression and injuries. In the northwest corner of Denver, a high concentration of yellow and red dots suggests that the combination of physical aggression and injury is worse here than in other areas of the city. In Panel B, psychological aggression was added to the physical aggression and injury ranking model. Psychological aggression was ubiquitous in the sample; thus, participants could have high scores in the ranking model because an incident was highly psychologically aggressive but not necessarily high in physical aggression or injuries. With this change in the ranking model, the northwest corner of Denver still has relatively high values; however, high values are now dispersed elsewhere in the city. Taken together, the panels in Figure 26 help us understand the spatial distribution of aggression and injuries. If we focus on physical aggression and injuries (as in Panel A), we identified a particular area of the city for outreach/intervention where the combination of aggression and injuries appear worse.

Of note, both ranking models were significantly related to women's SES Factor Scores (physical aggression and injury ranking model and SES: r=-.21, p=.002; physical aggression, psychological aggression, and injury ranking model and SES: r=-.22, p=.001) such that higher SES scores were associated with lower levels of aggression and injuries.

Because the inter-relationships between fear, depression, PTSD, and social support have been well-documented (see DePrince, Chu, & Pineda, under review), we also examined ranking models that combined these variables. Panel A of Figure 27 illustrates the ranking model for fear, depression, and PTSD symptom severity. When these factors were combined in a single ranking model, a cluster emerged in central Denver. In fact, of the 15 participants who had the

Panel A



Panel B

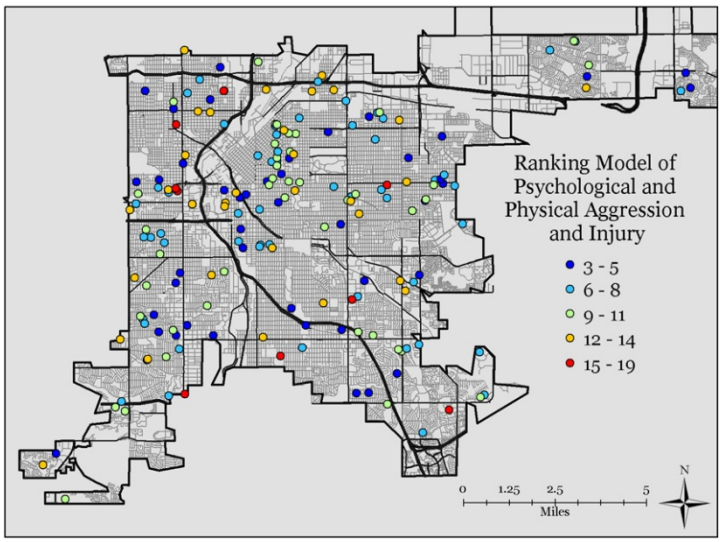
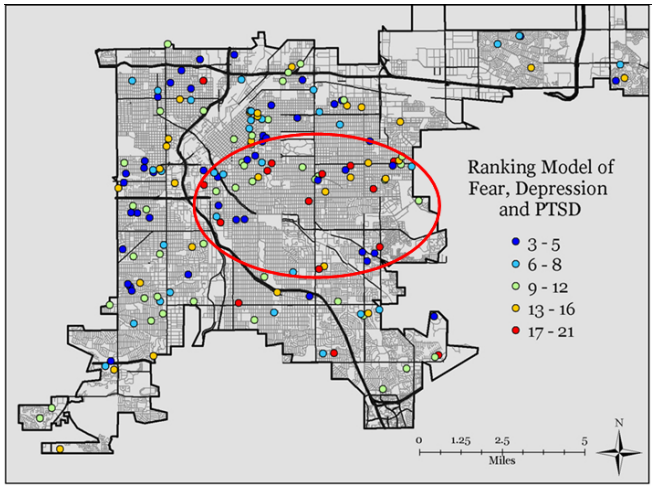
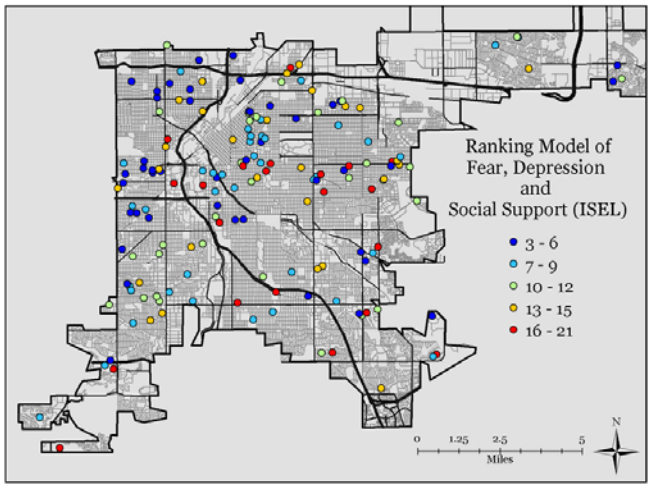


Figure 26. Example of two ranking models concerned with the spatial distribution of aggression and injuries for the target incident.

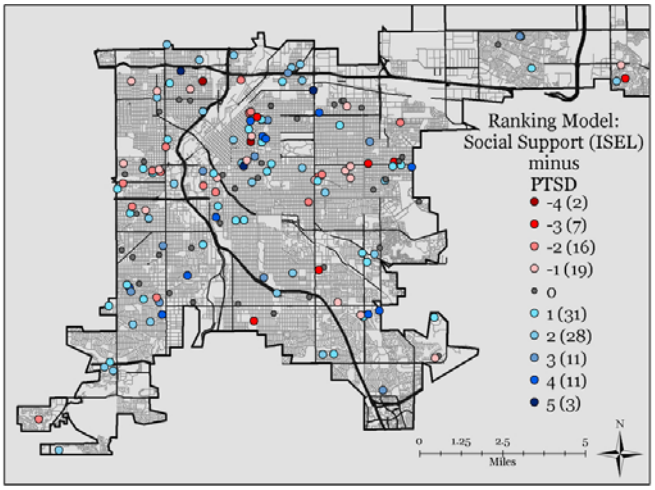
Panel A:



Panel B:



Panel C:



Note: Positive values indicate that problems in social support exceed PTSD symptom severity; negative values indicate that PTSD symptom severity exceeds problems in social support.

Figure 27. Ranking models the illustrate combinations of fear, depression, PTSD symptom severity, and social suport.

highest ranking model scores (ranging between 17 and 21, illustrated in red points), 11 were located in the red circle in central Denver. Panel B of Figure 27 helps us understand the relative influence of PTSD and social support in this constellation of factors. In particular, the ranking model in Panel B combines fear, depression, and social support (as measured by the ISEL; higher values in the ranking model indicate worse social support). Thus, differences in Panel A and B are due to differences between the inclusion of PTSD or social support in the ranking model. While a similar pattern is visible in the two panels, we note more extreme values in Panel B compared to Panel A. In particular, 21 people have scores in the highest range in Panel B compared to only 15 people in Panel A. These data suggest that the combination of fear, depression and poor social support create worse circumstances for people than the combination of fear, depression, and PTSD. In both cases, we see concerning data points (in red) in central Denver, though these data points are further dispersed in Panel B.

Next, we computed a different ranking model to identify situations where social support and PTSD symptom severity diverge; given that PTSD and social support often co-occur, identifying where they diverge has interesting implications for outreach. Panel C of Figure 27 illustrates a ranking model derived by the following calculation: social support class minus PTSD symptom severity class. Therefore, negative values (red hues) indicate that PTSD symptom severity exceed problems in social support; positive values indicate that problems in social support exceed PTSD symptom severity (blue hues). The figures in parenthesis in the legend indicate the number of participants who fit into each ranking. Ranking models such as this one can guide service programs in targeting particular areas. For example, programs that focus on increasing social support for women may target neighborhoods where distress exceeds social support.

Transportation and Spatial Factors in Criminal Justice Outcomes

Finally, we sought to understand transportation and spatial influences in women's lives during the study period.

Transportation Mode: Car versus Public Transportation Model. For later friction analyses, we characterized women's reports about access to different means of transportation by assigning them to either Car or Public Transportation models. To make this assignment, we used women's responses to a series of questions from T1, T2, and/or T3. In particular, we used information from how often women drove; how often women used public transportation (including bus or lightrail). Women who reported using cars were also asked about the percentage of time they drove themselves or got rides from someone else; who owns the car; and the percentage of time they have access to a car when really needed.

To give a sense of the data that went into assigning women to the Car or Public Transportation models, we present details about T1 responses. At T1, women were asked to indicate how often they drove a car in the last year. Of the 198 women who responded to this question, 35% reported never; 11% a few times; .5% 1 time/month; 4% a few times/month; .5% 1 time/week; 7% several times/week; and 43% daily. Next, women were asked how often they used public transportation (including bus or lightrail). Of the 197 women who responded to this question, 19% reported never; 19% a few times; 6% 1 time/month; 5% a few times/month; 2% 1 time/week; 15% several times/week; and 35% daily. Further, women (n=195) reported on the percentage of time they had access to a car when they really needed one: 44% reported all the time; 9% reported mostly; 4% reported sometimes; 7% reported irregularly; and 26% reported never.

Women who reported either owning or relying largely on private vehicles (e.g., a

mother's car to which they had access whenever needed) were categorized as Car models. All other women were assigned to the Public Transportation model. However, we checked this assignment across time points, recognizing that women's transportation circumstances could change. In some cases, women's transportation modes did indeed appear to change at T2 or T3. In those cases, model information was used from the interview that occurred closest to the case disposition date. If the data were still unclear or conflicting, we looked at the percentage of time women reported using public transportation in the interview items at each time point. If she frequently used public transportation, we assigned her to the public transportation model; if not, we assigned her to the car model. The percentage of women assigned to the Car and Public Transportation models by Group (O, R, D, NR) are reported in Table 34. Women differed by Group in their likelihood of belonging to the car or public transportation model (χ^2 (3)=13.19, p=.004). Follow-up analyses revealed that this overall effect was driven by the NR group differing from the other three groups.

Table 34.
Percentage of women categorized into car or public transportation models.

	Car	Public Transportation
O	56	44
R	59	41
D	47	53
NR	28	72

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

At T1, we asked women to anticipate transportation problems if they had to meet with the prosecuting attorney at the court house in downtown Denver (we showed women a map with location marked to assure they knew the location). First, we asked women who had some access to a car to imagine they planned to drive to the meeting; and to report on whether various car-

related transportation issues would present problems. Table 35 shows the percentage of women assigned to the Car Transportation model who reported that each issue would present a problem.

Table 35.
Percentage of women who assigned to the Car Transportation model who indicated that specific car-related issues would cause problems for attending a meeting with the prosecuting attorney.

Issue	N	% of women reporting this issue would present a problem
Cost of gas	84	27
Finding directions for how to get there	84	8
Finding parking	81	54
Paying for parking	82	43
Traffic	82	37
The time it takes to drive	85	14
Problems with license or insurance	84	9
Borrowing a car	85	7
Fear	84	9

Next, we computed the average number of problems reported by women from the list shown in Table 35 above for women assigned to the Car Transportation model. The average number of problems women anticipated did not vary by Group (Table 36; $F(3,102)=.56$, $p=.64$).

Table 36.
Descriptive statistics for number of problems reported by women assigned to the Car Transportation model.

	n	*Mean*	*SD*	Range
O	34	0.32	0.20	.00 - .75
R	20	0.28	0.22	.00 - .63
D	19	0.28	0.19	.00 - .56
NR	12	0.39	0.24	.00 - .78

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

We then asked women to imagine they planned to take public transportation to the meeting; and to report on whether various public transportation-related transportation issues

would present problems. Table 37 shows the percentage of women assigned to the Public Transportation model who reported that each issue would present a problem.

Table 37.
Percentage of women who indicated that Public Transportation-related issues would cause problems for attending a meeting with the prosecuting attorney.

Issue	N	% of women reporting this issue would present a problem
Distance of bus/lightrail from my house	104	13
Buying a ticket	102	22
Figuring out routes/connections	103	13
Time it takes on lightrail/bus	103	25
Fear (of taking lightrail/bus)	103	13
The number of connections I'd have to make	104	15
Hard to manage my belongings (bags, children, strollers)	104	26

Next, we computed the average number of problems reported by women assigned to the Public Transportation model. The average number of problems women anticipated with public transportation did not vary by Group (Table 38; $F(3,101=1.37$, $p=.26$).

Table 38.
Descriptive statistics for number of problems reported by women assigned to the Public Transportation model.

	n	*Mean*	*SD*	Range
O	30	0.25	0.24	.00 - 1.00
R	14	0.24	0.27	.00 - .86
D	28	0.14	0.21	.00 - 1.00
NR	33	0.24	0.25	.00 - .71

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Decisions to Go to Court: Friction Maps. For the next set of analyses, we focused on women who reported being asked to go to court because going to court required women to travel.

We used rasters to model transportation. Rasters allow for specific pixels to be designated as pathways while other pixels can be coded as impassable. Further, pixels that represent transportation routes could be assigned codes or values to define the ease of movement across that surface. We designed separate travel models for private car and public transportation. Initial models defined friction equal to distance. For example, the car model created pathways using Denver streets and calculated the shortest possible distance from each residence to the court house address. Distance values were raster-resolution dependant. Smaller raster pixels sizes produced longer distance values, while larger pixel values produced smaller values. This difference in distance based on raster pixel size occurred because passage across any pixel north-to-south or east-to-west is equal to 1x the pixel dimension while passage diagonally across a pixel is equal to 1.4x the pixel dimension (as the hypotenuse is longer than the sides of a right triangle). Therefore, addresses that required travel along roads that passed southwest to northeast or northwest to southeast were affected more by pixel size than addresses located in downtown Denver where the roads are based on grids. This complication based on pixel size is not unusual as raster analysis inherently scarifies some level of accuracy in order to create analytical maps (see Berry, 2007). We selected a 40-foot pixel because that size most generally represented the size of residential streets based on the orthophotoset in our GIS.

Car and public transportation models were constructed using different datasets. For example, initially, we only used Denver Country roads to create pathways for the car model. However, we soon realized that many participants who were located on the outer margin of the county would find a shorter more direct path if allowed to travel through adjacent Adams, Arapahoe, and Jefferson counties. These counties did not have publically-available road shapefiles; therefore, we used edited Tiger files limiting the roads to those specified as such in

the MAF/TIGER Feature Class Code (MTFCC) codes. All the road files were converted to the appropriate projection and then merged into a single shapefile then converted into a raster. For the public transportation model, we combined residential streets, bus routes, and light rail tracks into a single raster representing public transportation pathways. Many of these pathway types intersect; a light rail line passes over a road way, and streets intersect bas route. Therefore, we combined the public transportation pathways such that a pixel with multiple types of pathways received the fastest mode of transportation or friction code. Finally, we applied a cost-distance algorithm to each model to calculate distance from each woman's residence to the courthouse.

Rather than relying only on distance to the court house alone (which does not take into account that travelling 1 mile on a highway is faster than 1 mile on city side streets), we created more nuanced and complex models by approximating friction. We defined friction as ordinal values mostly closely related to rates of travel. For the car model, friction values were assigned based on road speed limits. Denver roads had a specific speed limit attribute; however, the roads from the Tiger Files did not; therefore, we based friction values on MTFCC codes. Frictions values were assigned as listed in Table 39.

Table 39.
Friction values assigned.

Model	Friction
Roads	
Speed limits: 55-70 mph	1
MTFCC:S1100 (primary roads) 1640 (ramps)	1
Speed Limit: 40-45 mph	1.5
MTFCC: 1200 (secondary roads)	1.5
Speed limit: 35 mph	2
MTFCC: 1300, 1740 (collector roads and private streets)	2
Speed limits: 30 mph	2.5
MTFCC: S1400 (residential)	2.5
Speed Limits: 25 mph	3
All others	3
Public Transportation Types	
Light Rail Lines	2
Buses Routes	4
Residential Streets	20

We used Denver light rail time tables to assess an appropriate light rail friction score. Bus speeds were assessed at approximately 15 miles an hour. Residential streets were coded as 20 to reflect a friction similar to walking which we estimated at 3 miles per hour.

The cost distance algorithm multiplies the distance across a pixel by the friction factor and finds the shortest route from one location to another. The model calculates the smallest sum of all pixels in the shortest route. In Figure 28, all friction values radiate out from the courthouse as they increase in size. We extracted a value for each participant and inserted those values into SPSS analyses.

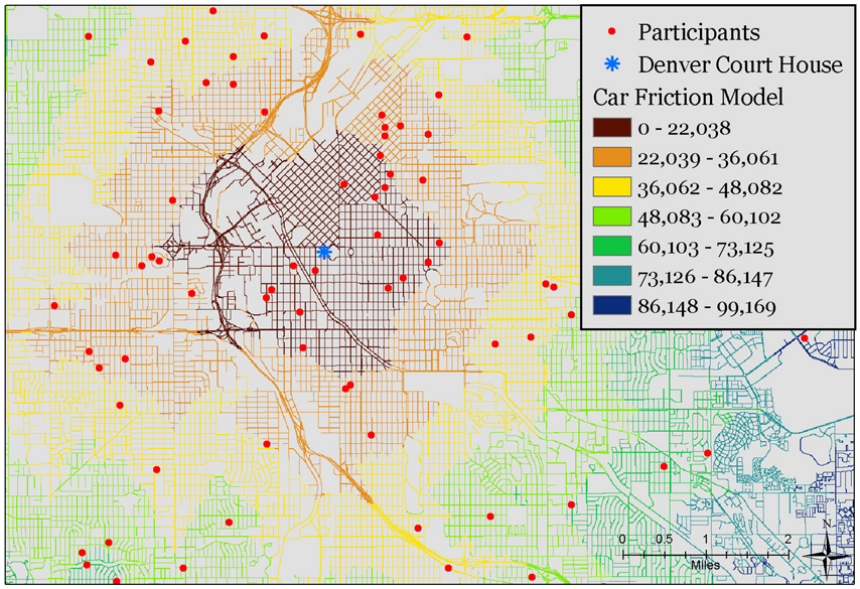


Figure 28. Transportation model for cars.

Among women asked to go to court, Groups did not differ on friction values (see Table 40). Women who went to court (*M*: 63617.75; *SD*: 35553.78) did not differ on friction values from women who did not go to court (*M*: 63633.93; *SD*: 38312.99): (t(106=.002), p=.99).

Table 40.
Friction values (feet) by Group.

	N	*Mean*	*SD*	Range
O	42	60592.18	36234.18	10786.27 - 158295.48
R	23	62947.41	38571.82	17454.29 - 172230.11
D	24	72512.82	34223.69	21915.29 - 139978.41
NR	19	59906.99	36398.24	10306.27 - 157346.41

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate.

Based on whether women were assigned to Car or Public Transportation models, we inserted the appropriate friction score into transportation regressions that characterize the difficulty moving from home to the court house. Because we saw differences in residence patterns for Latina and African American participants, we included Latina (yes=1; no=0) and African American (yes=1; no=0) identity in the model. In addition, we included SES because factors related to SES may affect women's ability to afford transportation. We also included the average number of problems women anticipated travelling to the court house at T1, the friction score, and whether women were assigned to car or public transportation models (0, 1 respectively). Finally, we controlled for Group.

The full model was significant ($X^2(9)=19.25$, $p=.02$). Table 41 shows the contribution of individual predictors. Three predictors explained unique variance in whether or not women went to court. First, women assigned to the O group were more likely to go to court than women assigned to the NR group. Second, women whose primary transportation mode was public transportation were 1.5 times less likely to go to court than women whose primary transportation mode was car. Third, greater anticipated transportation problems at T1 predicted a lower likelihood of going to court when asked.

Table 41.
Contribution of individual predictors to decisions to go to court or not.

	B	S.E.	Wald	Exp(B)
Group				
O versus NR	1.96	0.92	4.56*	7.086
R versus NR	-0.28	0.84	0.11	0.758
D versus NR	0.88	0.88	1.00	2.408
SES	-0.01	0.32	0.00	0.991
African American	0.95	0.68	1.92	2.574
Hispanic/Latina	0.08	0.68	0.01	1.08
Primary Transportation Mode	-1.47	0.71	4.31*	0.23
Anticipated Transportation Problems	-2.67	1.17	5.16*	0.069
Friction Values	0.00	0.00	0.65	1

Note: O=assigned to outreach; R=assigned to referral; D=declined outreach or referral; NR=never reached by system-based victim advocate. African American: yes=1; no=0. Hispanic/Latina: yes=1; no=0. Primary transportation mode: Car=0; Public Transportation=1. Anticipated transportation problems = average number of problems anticipated at T1.

Reactions to Participation

Participants' responses to research participation (characterized by RRPQ scores) are reported in Table 42, reflecting the mean (*SD*) scores for the five factors at T1 (N=222); T2 (N=187); and T3 (N=178). To assess the perceived costs and benefits of participating in this research, we first compared each subscale mean score to 3, the neutral point on the scale (1=strongly disagree; 5=strongly agree). For all three time points, scores on the three positive factors (Participation, Personal Benefits, and Global Evaluation) were significantly greater than 3 (neutral point), indicating agreement with statements indicative of positive gains and experiences in the study. Scores on the negative factors (Perceived Drawbacks and Emotional Reactions) were significantly less than 3, indicating disagreement with statements that tap unexpected or negative emotional reactions and inconveniences caused by the study.

Table 42.
Mean (SD) Scores for Subscales on the RRPQ and one-sample t-test values comparing mean scores to the neutral-point on the scale.

	T1		T2		T3	
Subscale	Mean (SD)	*t*	Mean (SD)	*t*	Mean (SD)	*t*
Positive:						
Participation	4.56 (.49)	46.53***	4.64 (.47)	47.87***	4.62 (.60)	35.95***
Personal Benefits	3.94 (.71)	19.70***	4.05 (.64)	22.63***	4.25 (.69)	24.32***
Global Evaluation	4.72 (.44)	58.07***	4.73 (.36)	64.82***	4.76 (.48)	48.15***
Negative:						
Emotional Reactions	2.80 (1.08)	-2.71**	2.50 (1.06)	-6.37***	2.65 (1.07)	-4.29***
Perceived Drawbacks	1.55 (.51)	-42.47***	1.55 (53)	-36.81***	1.50 (.54)	-36.65***

Note: 1=strongly disagree, 3=neutral, 5= strongly agree
**p<.01; ***p<.001

Second, to assess the perceived benefit-to-cost ratio, we compared the Personal Benefits subscale to the Emotional Reactions and Drawbacks subscales at each time point using a paired samples t-test (see Table 43). At each time point, women rated Personal Benefits as significantly higher than either Emotional Reactions or Drawbacks; effect sizes were large for all comparisons. These data demonstrate that the current research took place within a stable benefit-to-cost ratio.

Table 43.
Benefit-to-cost ratios for personal benefits, drawbacks, and emotional reactions.

	T1 (N=222)		T2 (N=187)		T3 (N=178)	
Personal benefits relative to…	*t*	Cohen's *d*	*t*	Cohen's *d*	*t*	Cohen's *d*
…drawbacks	35.55	3.87	34.92	4.24	33.60	4.43
…emotional reactions	15.67	1.24	19.77	1.77	18.89	1.78

Third, we tested whether T2 or T3 retention status was related to T1 RRPQ scores. Women retained at T2 or T3 did not differ from those not retained on T1 RRPQ scores; see Table 44. These analyses suggest that attrition was not related to negative reactions to the study.

Table 44.
T1 RRPQ scale scores as a function of whether women completed T2 or T3.

		T2			T3		
Scale	Retention	N	Mean	SD	N	Mean	SD
Participation	No	42	4.61	0.39	44	4.60	0.39
	Yes	173	4.55	0.51	171	4.55	0.51
Personal Benefits	No	43	3.86	0.73	45	3.92	0.71
	Yes	179	3.96	0.71	177	3.94	0.71
Global Evaluation	No	42	4.70	0.39	44	4.73	0.31
	Yes	178	4.72	0.45	176	4.71	0.47
Emotional Reactions	No	43	2.81	1.11	45	2.59	1.13
	Yes	179	2.80	1.07	177	2.86	1.06
Drawbacks	No	43	1.44	0.43	45	1.46	0.44
	Yes	179	1.57	0.52	177	1.57	0.53

Discussion

In collaboration with community- and system-based partners, the current study used an experimental design to test the impact of phone outreach from community-based agencies to women exposed to IPV compared to phone referrals provided by a system-based unit (i.e., the Victim Assistance Unit of the DPD or the City Attorney's Office) in a racially and ethnically-diverse sample of women. The phone outreach was informed by an interdisciplinary team involving both system- and community-based team members. The project's system- and community-based partners implemented the random selection process for approximately eight months. The research team accessed public information about non-sexual IPV incidents several times per week in order to facilitate a timely recruiting of participants. We enrolled 236 women within a median of 26 days of the target incident. Women were interviewed at three points in time: within a median of 26 days of the incident (T1); 6 months after the first interview (T2); and 12 months after the first interview (T3).

Characteristics of Groups. The study was designed to compare the two experimentally-manipulated conditions (O versus R). All available evidence points to the successful randomization of women to the O and R groups; these groups did not differ from one another on key demographic or case characteristics. However, two additional groups emerged that had to be considered: women who the system-based victim advocate was unable to reach after three attempts (Never Reached; NR) Group; and women who declined contact when reached by system-based victim advocate (Declined; D). Women in these naturally-occurring (that is, not randomly assigned) D and NR groups were also equivalent to women in the O and R groups on all demographic and case variables examined, with one exception: women who declined contact were significantly more likely to live with their partner at the time of the first interview (T1) than women in the other three groups. Because women in the D and NR groups were equivalent on all but one variable tested at the outset, we were able to compare all four groups in our primary analyses. However, we must be careful to again note that we do not consider the D and NR groups to be controls for the O and R groups because they were not randomly assigned; thus, interpretation of differences between O/R and D/NR groups should be made cautiously, particularly around any consideration of causal relationships.

Characteristics of the Sample. In addition to documenting equivalence across the groups on demographic and case characteristics, we noted interesting patterns in the sample across several variables. For example, the sample was diverse in terms of age at T1, encompassing women as young as 18 and as old as 63. Many women were dealing with significant economic pressures, as reflected by the median yearly net income in the sample of $7644. Though many women reported very small incomes, we did have heterogeneity in the sample in terms of income

with the highest reported yearly net income being $108,000. The majority of women (regardless of Group) identified the offender as a boyfriend or ex-boyfriend. These data point to the need for public education as well as services that are targeted to women in many types of relationships with intimate partners, including unmarried relationships.

Importantly, the vast majority (86%) of women in the sample reported previous instances of psychologically aggressive tactics in the 6 months prior to the target incident. In addition, more than half the women in the sample reported physical aggression (61%) or injuries (53%) caused by the offender in the 6 months prior to the target incident. Thus, for most women in the sample, the target incident reflected a continuation of aggression and abuse in their intimate relationships.

Outreach and Criminal Justice Outcomes. This study examined several criminal justice outcomes, including women's cooperation/reluctance with prosecution; whether she went to court; and case disposition. Across all variables, we found evidence that victim-focused contact (O and R groups) was linked to better outcomes than lack of contact (D and NR groups). Women were significantly more likely to cooperate fully with prosecutors (versus no cooperation) when they were in the O or R group compared to D or NR. In fact, those women in either the O or R groups were 6 times more likely to report full cooperation (versus no cooperation) than women who were never reached by system-based victim advocate. Interestingly, perceptions of physical (but not economic) dependence on the offender were associated with decreases in likelihood of full cooperation. We asked about physical dependence at T3 because of spontaneous, anecdotal reports women made about concerns over physical dependence on the offender at T1/T2. Thus, these finding points to the importance of using interview approaches that allow women's

concerns to emerge over time so that systematic questions can be added to later interview time points.

SES did not moderate cooperation effects; however, higher SES was associated overall with greater likelihood of cooperation. At this point, it is unclear why lower SES is associated with less likelihood of full cooperation. To try to understand this finding, we turn now to examining SES in relation to several variables that might be important for cooperation, such as transportation barriers (as measured by transportation problems), dependence on the offender, and severity of the incident. While SES was not significantly related to transportation problems ($r(170)=.10$, $p=.18$), we did note modest relationships between SES and women's perceptions of physical ($r(170)=-.15$, $p=.049$) and economic ($r(222)=-.16$, $p=.02$) dependence. SES was also significantly linked to the physical severity of the incident, with women of lower SES reporting greater severity of physical aggression ($r(230)=-.24$, $p<.001$). Thus, SES may operate through or in conjunction with mechanisms such as dependence and physical aggression severity to have an impact on cooperation. SES may also predict particular beliefs about the criminal justice system that affect the likelihood that women will cooperate. We were unable to test this latter explanation in our current dataset.

We also examined the likelihood that women were asked to go to court; and went to court if asked. Importantly, being in the O or R groups relative to D or NR groups were associated with a greater likelihood of being asked to go to court. In fact, 67% of women in either O or R groups were asked to go to court relative to only 47% of women in the D or NR groups. This difference in the likelihood of being asked to go to court is particularly striking because the groups were equivalent at T1 on relevant demographic and case characteristics (except the likelihood of living with the offender at the T1 interview, where the D group differed from the

other three groups), suggesting that neither case nor demographics characteristics drove decisions about who was asked to go to court. Instead, the data suggest that early contact with system-based advocates is associated with a higher likelihood of invitations to be involved in later criminal justice proceedings.

When we looked specifically at whether women went to court when asked, the data revealed a modest and encouraging trend for the effect of outreach. In particular, analyses suggest that women assigned to the O group were more likely to go to court than women in the R group, with an effect size of *d*=.40. Among ethnic minority women, those who were randomly assigned to the O group were significantly more likely to go to court than those assigned to the R group (78% versus 53% respectively). This suggests that outreach may be particularly useful for ethnic minority women, in terms of decisions to go to court. Ethnic minority women, more so than majority women, may feel disenfranchised from the criminal justice system. Unsolicited outreach by a community-based advocate who communicates interest in the women's well-being may buffer against beliefs and/or past experiences of invalidation in the system. Thus, future research should evaluate whether outreach from community-based agencies helps ethnic minority women feel more connected and valued in the system.

In terms of case disposition, we noted first that roughly one-third of cases were closed by T1 and almost all cases were closed by T2 (6 months after T1). Among those cases where a charge was accepted for prosecution and disposition dates were available, the groups did not differ in the number of days from the target incident to the case closure. To evaluate the impact of outreach on case disposition, we examined both continuous (number of guilty verdicts) and categorical (no charges filed versus dismissed, etc.) coding of the data. The groups did not differ in terms of number of guilty verdicts entered or severity of the case disposition. Nor did the

groups differ on overall case disposition when viewed categorically. That is, the groups appeared equally likely to have their cases end with no charges filed/refused; dismissal; or a verdict entered. However, several factors did have an effect on outcome that should be noted. Women who identified as ethnic minorities and women with higher SES had greater likelihood of having a verdict entered (relative to having cases dismissed or not filed). This finding is consistent with the relationship observed between SES and likelihood that women went to court when asked. In addition, the data suggested that living with the offender at the time of the incident increased the likelihood that cases would be dismissed relative to having a verdict entered.

Because living with the offender emerged in these analyses, we looked more closely at the effects of outreach for women who continued to live with the offender at T1 (approximately one month from the incident). Among these women, a striking effect of outreach emerged: 100% of women randomly assigned to outreach had verdicts entered in their cases versus only 33% of women randomly assigned to the referral group. In fact, 56% of women in the referral group had their cases dismissed and 11% had either no charges filed or charges refused. This finding, then, points to a subgroup of women for whom outreach may be particularly helpful: those who continue to cohabitate with the offender in the month after the reported incident.

Victim well-being. Several dimensions of victim well-being that have been linked to IPV exposure were evaluated, including PTSD and depression symptom severity as well as fear. Women responded to questions about PTSD, depression and fear at all three data collection points. When asked about PTSD symptoms as well as fear, women were prompted to answer questions in relation to the target incident/offender. Not surprisingly because fear, PTSD, and depression are related concepts, analyses returned generally similar findings. In general, women

in the D and NR groups reported lower symptoms/fear at T1 relative to the women in the O and R conditions. This may reflect some degree of self-selection in the victim care network. If a woman is not experiencing distress at the time the system-based victim advocate contacted her, she may be more likely to turn down offers for help and/or not return messages.

Across all three forms of distress (PTSD and depression symptom severity as well as fear), the O group showed greater gains at T3 than the R group. This appeared to be due to increases in distress among those in the R group from T2 to T3. When looking at within subject effect sizes for the change from T1 to T3, the O group had consistently larger effect sizes than the R group. Because the groups did not differ in attrition, the gains showed by the O relative to the R group across forms of distress do not appear to be due to losing women with higher symptoms in one group or the other; rather, the effect appears to be one of outreach. Curiously, though, the women assigned to outreach did not report service use at Triage partner agencies at higher levels than women assigned to the referral group. Thus, the active ingredient of the outreach that drove differences in symptoms remains unclear, and appears unrelated to contact with Triage Project partner agencies. Anecdotally, several women volunteered during the interview that they thought someone cared because they received an unsolicited phone call asking if they needed services. To the extent that alienation from others predicts distress (see Herman, 1997; DePrince, Chu, & Pineda, under review), outreach to women may lessen beliefs about one's isolation in a way that has a positive impact on well-being. Alternatively, women who receive outreach may end up accessing greater services at other agencies once they are connected through one of the Triage partner agencies, though we believe that this possibility is more remote.

Social Support. We were surprised to find that outreach had no apparent effect on social support across multiple measures of social support. We did conduct exploratory analyses, not reported in detail in this report, to examine different dimensions of social support (e.g., tangible support versus feelings of belonging) within the ISEL; however, the groups did not differ by particular support dimensions either. Thus, the null finding does not appear due to treating social support as a unitary construct. That said, social support items were not tied to particular support sources. Thus, groups may differ on perceptions of support when asked about particular support sources. However, we are unable to address this possibility with the current data.

Revictimization. At either T2 or T3, women's exposure to additional instances of aggression by the target offender and/or a new partner was all-too-common. A few things from these data should be noted. First, this sample was recruited from reports of non-sexual IPV; however, roughly one-third of women in the sample reported that the target offender engaged in at least one sexually aggressive tactic during the year after the first interview. These data demonstrate the importance of asking women exposed to IPV – even IPV that was non-sexual in nature when reported to law enforcement – about sexual aggression, as IPV is certainly not limited to psychological and physical aggression. Second, almost 70% of the women reported that the offender engaged in at least one stalking behavior during the year after the first interview. For approximately one-third of the women, conflicts with the offender continued to be physically aggressive. Third, roughly one-quarter of women reported that a new partner engaged in at least one psychologically aggressive tactic during the study period. In addition, 7 to 15% of women reported physically aggressive, sexually aggressive, or stalking behaviors in their new partners. Thus, women continued to be at risk from the target offender over the year after contact

with law enforcement. Further, a sizeable minority of women faced additional risks from new intimate partners during the year as well.

We entered this study predicting that outreach would increase victim safety; however, we came to think very differently about this prediction over time. As is clear in the criminal justice and victim well-being data, contact with a system-based advocate and/or outreach are associated with positive effects in terms of engagement with the criminal justice system and well-being. However, these things are, to some degree, within women's capacity to influence. That is, women can make decisions about cooperation and going to court. While women do not decide to experience PTSD, they can exert control over decisions to seek services and/or other support that may mitigate such distress. Women, however, obviously cannot control their partners' behaviors. Thus, predicting that outreach to victims would necessarily increase safety failed to take into account specific domains in which women may be able to affect change or not in their lives. To try to tap a safety variable that was more likely to be within a woman's control, we did examine the proportion of new aggression women indicated they reported to law enforcement. That is, perhaps early outreach could increase the likelihood that women would be willing to re-engage the system when violence occurs again. Anecdotally, though, women also told interviewers that they feared that additional calls to law enforcement might actually decrease safety; thus, even examining futures calls to law enforcement seems to be a flawed measure of safety that is within IPV victims' control. In fact, we found no differences across groups in terms of the proportion of new incidents reported to law enforcement at T2 or T3.

While we do not have evidence that outreach increased women's safety (and we have concerns now that this was an unreasonable expectation), we do have evidence that women assigned to outreach (relative to referral) were more likely to articulate plans to leave or to have

already left the offender at T3. This suggests that outreach is associated with changes that are more directly in women's control (i.e., plans to leave) than in the offenders' control (whether or not he engages in aggressive behaviors). At T3, we asked women the following questions: (1) Are you currently in a relationship with [the offender]?; (2) If not, have you been out of the relationship for over 6 months?; (3) Are you thinking about leaving the relationship sometime in the next 6 months?; (4) Are you planning to leave the relationship in the next 30 days?; and (5) Have you left the relationship or tried to leave sometime in the past year? According to the Transtheoretical Model of Stages of Change, women who were still in a relationship with the offender and were not considering leaving in the next 6 months were coded as 1 (Precontemplation). Women who were still in the relationship with the offender but were considering leaving in the next 6 months (and not planning to leave in the next 30 days) were coded as 2 (Contemplation). Women who were planning to leave in the next 30 days and had previously left or tried to leave the relationship in the past year were coded as 3 (Preparation). Women who had left the relationship within the past 6 months were coded as 4 (Action). Finally, women who had left the relationship over 6 months ago were coded as 5 (Maintenance). Women assigned to the outreach group had significantly higher scores at T3 compared to women in the referral group, suggesting greater readiness to change associated with the outreach with a medium effect size.

Service Use. We did not find differences in the likelihood of women having contact with Triage Project community-based agencies depending on their assignment to outreach or referral; however, women in the O and R groups were significantly more likely to have had contact with these community-based agencies than women in the D and NR groups. Notably, service use appeared to have some specificity in terms of links between the types of services they provided

and study variables. For example, Project Safeguard's organizational goals include providing legal advocacy, including assistance with civil protection orders and related issues to prevent or end violence. Consistent with these goals, women who had contact with Project Safeguard were more likely to report higher degrees of cooperation and higher stage of change scores (indicating greater readiness to leave the relationship) than women who did not have contact with Project Safeguard. However, we cannot comment on the direction of these effects (that is, women committed to leaving the relationships may be more likely to contact Project Safeguard; or contact with Project Safeguard may influence women's decisions to leave). SafeHouse Denver provides shelter and counseling services to IPV victims. Women who contacted SafeHouse Denver reported higher levels of distress than those who did not. Given the importance of timely interventions to address women's needs following IPV, these findings suggest that at least some women are appropriately finding their way to service-specific agencies in Denver.

Spatial Findings. We used spatial analyses in two ways for the current study: 1.) to examine the spatial characteristics of key study variables; and 2.) to examine transportation barriers to going to court among those women asked to go.

Turning first to the examination of spatial characteristics of key variables, we discovered that two variables were autocorrelated, indicating a non-random spatial pattern. In particular, psychological aggression and the cumulative number of agencies women contacted were autocorrelated. Both variables showed strong clustering patterns across the entire dataset. Though both were autocorrelated, psychological aggression scores were unrelated to the cumulative number of agencies women contacted.

We believe to the psychological aggression finding may reflect a pattern about the male offenders. The psychological aggression inventory aggregates male partner behaviors such as

shouting, insulting, threatening, and destroying property. The strong spatial cluster suggests that male partners engaging in these behaviors are surrounded by other males engaging in similar behaviors. The spatial clusters, therefore, raise questions about the extent to which neighbors who share such psychologically aggressive behaviors/attitudes fail to intervene or even perhaps facilitate these behaviors in others, particularly given that behaviors such as shouting could be heard by others living nearby.

The autocorrelation regarding contact agencies women's decisions to contact agencies may be socio-economically or culturally influenced. None of the socio-economic indicators were autocorrelated, however; if you lived near someone who contacted an agency you were more likely to contact one yourself. We suggest contact agencies may be autocorrelated because neighbors recommend services to one another, reflecting a word-of-mouth phenomenon.

In addition to global patterns in the data, we found several important regional or neighborhood spatial patterns. Both social support variables (ISEL and satisfaction with social support) were higher on the west side of Denver relative to the east side. The distinction is nicely shown in the cluster values in Figure 19. The clusters of social support closely mirror the ethnic identity maps, particularly the relative division of women who identified as Latina (west Denver) and African American (east Denver). Depression, fear, and PTSD symptom severity maps also showed patterns that appeared to split along east-west segments. This split also appears in maps of incident characteristics. For example, Figure 27 shows that women living in the northwest quadrant of Denver report higher combinations of physical aggression and injuries than in other areas. In addition to comprising Latina women, the northwest quadrant includes a substantial cluster of high SES values. Notably, both incident ranking model maps in Figure 27 are

correlated to SES values, suggesting that global patterns observed among these variables may relate to SES and/or ethnic identity.

We included several ranking models to offer examples of how spatial data can be used to inform policy and programmatic decisions by highlighting communities that face unique combinations of issues. Indeed, the ranking models presented in this report pointed to very interesting patterns. For example, while target incidents tended to include higher combinations of aggression and injuries to the west, distress (the combination of fear, depression, and PTSD symptom severity) tended to be higher to the east. This pattern of data points to the possibility that social support and/or ethnic identity may moderate the influence of more aggressive/injurious experiences on psychological symptoms. Social support mapped closely on to variation in ethnic identity (see Figures 9 and 19) with divisions along east-west segments of the city. Identifying the mechanisms that drive spatial patterns is a considerable challenge, particularly in the current project because so little work has examined women's experiences of IPV in a spatial context. We are continuing work to understand spatial patterns in this dataset and have begun analyses to evaluate other relevant neighborhood variables, such as land use values and other types of reported crime.

In terms of transportation barriers to going to court, we found that women's perception of getting to court strongly predicted whether they attended or not. Although we constructed detailed GIS models accumulating the friction of either driving or public transportation, the friction values were unrelated to court attendance. However, when we tested a model that included several spatially-relevant variables (Group; African American and Latina ethnicity; SES; primary transportation mode; number of transportation problems anticipated at T1; and friction values), we discovered that women who relied on public transportation and women who

anticipated more transportation problems at T1 were less likely to go to court. Interestingly, women's perceptions of transportation problems were more strongly related to whether or not they went to court that the friction models that quantified time and distance. This may be because perceptions matter more to decision-making or because the anticipated problem list took into account factors that could not be model based on time and distance, such as the additional challenge of coordinating travel for children or fear of making one's way downtown.

The findings from the logistic regression predicting whether or not women went to court fit with our anecdotal conversations with women during the study. For example, the PI interviewed one woman who planned to go to court to testify against the offender. In fact, she had broken up with the offender after he became abusive and described herself as eager to testify in the trial to ensure that he would be held accountable for his behavior. Reliant on public transportation, she recounted that she had researched ahead of time what bus lines to take and transfers to make to get to the court house. The day of her scheduled testimony, the bus driver informed her that she was fifty cents short for the fare, which she did not realize because she did not usually go downtown on the bus. She did not appear in court. Interestingly, earlier in the interview, the woman reported that she did not go to court when asked; however, she did not volunteer the reason. Only when she was asked specifically about transportation problems did she describe (with some degree of visible relief at being able to explain what happened) her fare problems. If our research had failed to ask about structural barriers to getting to court, we would have been left wondering why this woman did not "cooperate" when in fact, she fully intended to participate in the criminal justice process, but was fifty cents short.

Responses to Research Participation

At the end of each interview, we asked women to report on their perceptions of the research process using the RRPQ. To address potential concerns regarding social desirability, women were asked to complete the RRPQ privately and to slide their responses into an envelope that the interviewers did not examine. The overall pattern of RRPQ data is consistent with participant responses to other studies in our lab (e.g., DePrince & Chu, 2008). At each time point, women rated the positive scales in such a way to indicate agreement (significantly greater than the neutral point on the scale) and negative scales to indicate disagreement (significantly less than the neutral point on the scale). We next compared the personal benefits women reported to the two negative scales (drawbacks to participating in the study, such as procedures taking too long; and emotional reactions, such as unexpected negative feelings). In both comparisons across all three time points, women rated the personal benefits as significantly greater than the costs. The effect sizes were large. Thus, we are confident that this research was conducted within a positive and stable benefit-to-cost ratio.

The T1 RRPQ data are particularly notable because compared to participants in our other studies where we have examined responses to participation (e.g., DePrince & Chu, 2008; DePrince & Freyd, 2004), women in the current study had more recent violence exposure; and knew fewer details about what to expect in the interview when they scheduled the interview. In fact, when women arrived for the first session, they knew only that they were invited to participate in a study on "Women's Health." During the consent process, interviewers informed women that their names were accessed through police reports. While such information could have been negatively received by women (e.g., perceived as an invasion of privacy), these data suggest that study procedures addressed women's concerns in such a way that they left the first session feeling positively. Women's responses at T2 and T3 demonstrate our ability to maintain

a positive benefit-to-cost ratio over the course of this longitudinal study. Further, women's responses to study procedures (positive or negative) at T1 were unrelated to their decisions to return for T2 or T3 interviews. Taken together, these findings provide evidence that research can be conducted within a stable benefit-to-cost ratio among women recently exposed to IPV; and that perceptions of drawbacks/emotional reactions related to participation are unrelated to retention at later time points.

Study Limitations

Our first interview occurred within a median of 26 days from the incident. In spite of how quickly we were able to interview women, we lacked a true baseline prior to women's contact with system- or community-based personnel. We had no feasible way of contacting and interviewing women prior to their contact with system-based advocates (e.g., DPD advocates sometimes go to the scene of incidents as well as begin calls to victims the morning after the incident). Thus, we do no know what effect the initial contact with system-based advocates had on women prior to our T1 assessment.

We designed the current study with three interview points, in part, to facilitate testing mediators of any Group effects on criminal justice outcomes. That is, we assumed that we would measure possible mediators at T2 on Group effects at T3. We found, though, that 94% of cases were through the criminal justice process prior to T2. Thus, we were not able to test mediators as planned.

We attempted to examine procedural justice in terms of women's views of how they were treated by the court if asked to testify. Unfortunately, so few women testified in court during the study period that the sample was too small for meaningful analyses. This is a limitation of the current dataset. In the future, we would like to examine multiple procedural fairness factors,

including the quality of decision-making and treatment at both formal (e.g., evaluation of the formal rules/decisions of a group) and informal (e.g., evaluation of the implementation of rules/decisions by particular members within the group) levels (see Blader & Tyler, 2003).

Study Strengths

In spite of the study limitations, several strengths should be noted. In particular, one of the primary strengths of this study was the incredibly successful collaboration between research, system-based, and community-based partners. For approximately eight months, the system- and community-based partners adapted their procedures to randomly select women for outreach in order to facilitate the most rigorous test of their outreach program. The PI met regularly with system- and community-based partners to facilitate this successful collaboration.

The current study, unlike many of the existing studies assessing IPV outreach, involved random assignment of women to receive outreach (versus referrals, which served as the control). In addition, we collected information on characteristics of the IPV incident and the women in order to examine moderators of outreach effectiveness. Thus, results from the current study can inform best practices for the Triage Project to maximize positive effects. Moreover, given the sample size and careful research design, we hope that the findings from the current study can provide other jurisdictions with an understanding of the moderators' nuanced effects.

Few of the existing studies on community outreach programs are longitudinal in nature, thus the current study is somewhat unique in examining some of the longer term effects of an outreach program experienced and reported by the IPV women survivors in the study. Finally, the spatial data and analysis in the current study are rare in the research on IPV and community outreach. For these reasons, the current study allows for an unprecedented examination of outreach IPV programs.

The current study provides evidence of positive effects of victim-focused services on criminal justice outcomes (e.g., increased likelihood of going to court) and women's well-being (e.g., decreased fear, depression, and PTSD symptoms). For example, we found positive effects for outreach and referral conditions on several criminal justice outcomes as well as specific effects for outreach among marginalized women. Further, the current study provides examples of ways that data can be examined spatially to identify areas where services may be targeted. Thus, the current findings are directly relevant to policy makers and practitioners seeking to develop and adapt victim-focused services following IPV. Further, this project offers a template for the successful collaboration of research, system-based, and community-based partners to implement a randomized control design. And finally, in the context of carefully designed and implemented assessment protocols, the current project documents women's positive perceptions of the research process following IPV.

Summary and Policy Implications

In sum, the current study demonstrated the positive impact of community-based outreach to women following reports of IPV using a rigorous experimental design. In addition to documenting the benefits of outreach, the study also examined several important outcomes following IPV over a one-year period, ranging from social support to experiences of revictimization to perceptions of transportation problems. Table 45 summarizes several key practice and policy implications of this research.

We have been very successful with our dissemination efforts both locally and internationally. Table 46 summarizes some of our dissemination efforts. We are beginning to see policy/practice change locally related to these findings. For example, based on our report of these findings to the Denver Police Department, the Division Chief overseeing the Victim Assistance

Unit charged that unit with developing a Parking and Transportation Plan to address logistical barriers to participation in the criminal justice response for IPV victims. We look forward to collaborating locally and nationally to translate this research into policies and practices that support victims and hold abusers accountable.

Table 45.
Key policy and practice implications based on a randomized, longitudinal evaluation of the effectives of coordinated outreach in intimate partner violence cases

Policy/Practice Issue Addressed	Study Findings	Policy/Practice Implications
Early, victim-focused contact matters.	Women with early victim-focused contact from system-based advocates were more likely than women never reached by system advocates to be asked to participate in court proceedings.	Early, victim-focused contact with victims promotes engagement with the criminal justice system in terms of likelihood of being asked to participate by system professionals, as well as victims' own reports of engagement with prosecutorial tasks. Victim advocates within law enforcement agencies and community-based advocates should contact victims in a timely manner following incidents of IPV.
	Women with early victim-focused contact from system-based advocates were more likely than women never reached by system advocates to report partially or fully cooperating with the prosecution of their abusers.	
	Women with early victim-focused contact from system-based advocates were more likely than women never reached by system advocates to have contact with a community-based agency providing IPV services.	Efforts to achieve contact by advocates (both system-based and community-based) should be enhanced so that a higher proportion of IPV victims will have contact with more IPV services.
Coordinated, victim-focused outreach has an impact on women's participation in the criminal justice process.	Among women asked to go to court, women randomly assigned to receive victim-focused, community-based outreach (O condition) were significantly more likely to go to court than women randomly assigned to received referrals from system-based advocates (R condition).	Women's participation in court proceedings can be key to the successful prosecution of cases. Collaboration across law enforcement, criminal justice, and community-based stakeholders to initiate victim-focused outreach has a positive impact on women's participation in prosecution: Coordinated, victim-focused outreach increases the likelihood that women will go to court.

Coordinated, victim-focused outreach has an impact on women's well-being.	Women randomly assigned to receive victim-focused, community-based outreach (O condition) report greater decreases in distress (i.e., PTSD symptom severity, depression, and fear) one year later than women randomly assigned to receive referrals from system-based advocates (R condition).	Compared to system-based services, outreach services consisting of collaborations between community programs and mental health services improve the well-being and mental health among victims of intimate partner abuse.
	Women randomly assigned to receive victim-focused, community-based outreach (O condition) were more likely than women assigned to receive referrals from system-based advocates (R condition) to have left or be planning to leave their abusers one year later.	Victim advocates, and specifically system-based advocates, should place an emphasis on safety planning, including preparations for leaving abusers. Community-based outreach may be particularly valuable for supporting women's decision-making with regard to the status of their relationships with offenders.
Individual and case characteristics matter.	IPV victims' physical dependence on their abusers decreases the likelihood that they will cooperate with the prosecution process.	In the context of limited resources, practitioners can use research to guide how they target interventions. A resource priority should be placed on reaching out to subgroups of victim/survivors who might be at particularly high risk and/or who might especially benefit from interventions. For example, women who report that they feel physically dependent on their abusers also report lower levels of cooperation with prosecution. Thus, IPV services should address factors that decrease victims' physical dependence on their abuser. Relative to system referrals, community-outreach to women still with their abusers a month after the incident is likely to improve criminal justice outcomes.
	Among ethnic minority women, those who receive community-based outreach were more likely to go to court compared to women who received treatment-as-usual.	
	Among women still living with their abusers one month after the target incident, 100% of those who received outreach had verdicts entered in their cases (relative to only 33% of women in the referral condition).	

		Outreach may be particularly useful for ethnic minority women, who may be more likely than non-ethnic minority women to feel disenfranchised by the criminal justice system.
	A high proportion of women in police-reported IPV cases identify their abusers as current or former boyfriends.	There is need for public education as well as services that are marketed to women in many types of relationships, including unmarried relationships.
Revictimization is common in the year after IPV is reported to law enforcement.	The majority of women in this sample reported additional incidents of aggression by either the abuser from the original incident or a new partner.	Public education and service providers should recognize and be prepared to address that the majority of women exposed to IPV will experience additional incidents in the future.
Unique spatial patterns	Women's reports of their male partners' psychological aggression were spatially clustered, suggesting that psychologically aggressive men live near other psychologically aggressive men.	Prevention and intervention programs that are focused on men should consider neighborhood deployment.
	Women who contact agencies for assistance in coping with IPV are likely to influence their neighbors to do so as well.	Intervention programs should consider word-of-mouth referrals in increasing access to and participation in services.
	Several IPV outcomes (e.g., social support, distress) have spatial patterns that suggest regional/neighborhood effects warranting further research.	These patterns should be reinvestigated using the new 2010 Census data.
Barriers to participating in the system.	Women's anticipation of (that is, perception of future) transportation difficulties was a better predictor of women's court appearance than objective measurements of transportation friction. As the number of anticipated difficulties	Women's participation in the prosecution of their abusers is strongly connected to their perceptions of transportation difficulties (e.g. find parking, cost of parking.) Resources made available to IPV victims to participate in court may increase the likelihood

	increased, the likelihood that women appeared in court decreased, even when controlling for other relevant factors (e.g., distance to court, socio-economic status).	that they will be there.
Engaging victims over time successfully.	Over 80% of the 236 women enrolled in this study were retained at either or both of the follow-up interviews (6 and 12 months after the first interview). Further, women consistently reported that their experiences of talking about IPV in-depth in the interview were associated with greater personal benefits than emotional costs.	It is often assumed that IPV victims are reticent to talk in-depth about their experiences and/or that victims are difficult to engage over time. This research demonstrates that careful procedures designed to stress women's rights and dignity in the process are actually associated with women's perceptions of benefiting from taking part in the research.

Table 46.

Sample dissemination efforts.

Manuscripts in press

- DePrince, A.P., Belknap, J., Labus, J., Buckingham, S.E., & Gover, A.R. (in press). The impact of victim-focused outreach on criminal justice system outcomes following police-reported intimate partner abuse. *Violence against Women*.
- DePrince, A.P., Chu, A.T., & Pineda, A. (in press). Alienation and betrayal: New perspectives on posttraumatic distress. *Psychological Trauma: Theory, Research, Practice, & Policy*.

Paper presentations (authors indicate presenters)

- DePrince, A.P. (November, 2010). Women's Social Context and Well-Being following Police-reported Intimate Partner Abuse. Paper presented for the Battered Women's Justice Project Webinar on Violence against Women: Researcher/Practitioner Discourse Women's Lived Experience with Sexual and Domestic Violence, 2010 Series, Session 7 (1.5 hours).
- Matlow, R.B. & DePrince, A.P. (November, 2010). Factors influencing readiness to change in female victims of domestic violence. Paper presented at the Annual Meeting of the Association for Behavior and Cognitive Therapy. San Francisco, CA.
- DePrince, A.P. (October, 2010). Violence against women and children: Research and social justice. Invited Keynote Address, Colorado Undergraduate Psychology Conference. Alamosa, CO.
- DePrince, A.P. & Mitchell, C. (August, 2010). Women's Perceptions of Social Responses Following Intimate Partner Violence. Paper presented at the Annual Meeting of the American Psychological Association. San Diego, CA.
- DePrince, A.P., Chu, A.T., & Pineda, A. (August, 2010). Connection to self and others in relation to posttraumatic symptoms. Paper presented at the Annual Meeting of the American Psychological Association. San Diego, CA.
- DePrince, A.P. & Buckingham, S.E. (June, 2010). A preliminary examination of spatial trends in women's experiences of and responses to police-reported intimate partner abuse (IPA). Invited presentation at the 2010 National Institute of Justice Conference. Alexandria, VA.
- DePrince, A.P. (June, 2010). Improving outcomes following police-reported IPA through a *victim-focused* community-coordinated response program. Invited presentation at the 2010 National Institute of Justice Conference. Alexandria, VA.
- DePrince, A.P. (June, 2010). Focusing on domestic violence victims to improve criminal justice outcomes. Invited presentation to the Denver Police Department Division Chiefs. Denver, CO.
- DePrince, A.P. (May, 2010). Preliminary findings from the Denver Triage Project. Invited presentation to the Triage Steering Committee of the District Attorney's Office. Denver, CO.
- DePrince, A.P. & Mitchell, C. (August, 2010). Women's Perceptions of Social Responses Following Intimate Partner Violence. Paper presented at the Annual Meeting of the

American Psychological Association. San Diego, CA.

- DePrince, A.P., Chu, A.T., & Pineda, A. (August, 2010). Connection to self and others in relation to posttraumatic symptoms. Paper presented at the Annual Meeting of the American Psychological Association. San Diego, CA.
- Matlow, R.B. & DePrince, A.P. (November, 2010). Factors influencing readiness to change in female victims of domestic violence. To be presented at the Annual Meeting of the Association for Behavior and Cognitive Therapy. San Francisco, CA.
- DePrince, A.P. (November, 2009). Mental health and neuropsychological correlates of violence exposure in children and adults. Invited paper presentation to the Psychology Department, National Taiwan University. Taipei, Taiwan.
- Hebenstreit, C. H., & DePrince, A. P. (2009, November). *Perceptions of trauma research in women exposed to intimate partner violence.* Paper presented at the annual meeting of the International Society for Traumatic Stress Studies. Atlanta, Georgia.
- DePrince, A.P. (June, 2009). Violence against women: Examining case, individual, and spatial characteristics. Invited paper presentation at the National Center for PTSD. Boston, MA.
- DePrince, A.P. (May, 2009). Consequences of violence against women: Examining case, individual, and contextual factors. Invited paper presentation to the Department of Psychology, University of Oregon. Eugene, OR.

Poster presentations

- Hebenstreit, C. & DePrince, A.P. (November, 2010). The Impact of Victim and Perpetrator Substance Use on Revictimization in Women Exposed to Intimate Partner Violence. Poster to be presented at the Annual Meeting of the International Society for Traumatic Stress Studies. Montreal, Canada.
- Kay, A., Carter, S., Hebenstreit, C., Belknap, J., & DePrince, A.P. (November, 2010). Links between specific forms of social support and PTSD symptom severity. Poster to be presented at the Annual Meeting of the International Society for Traumatic Stress Studies. Montreal, Canada.
- Matlow, R. & DePrince, A.P. (November, 2010). Factors Influencing Readiness to Change in Female Victims of Domestic Violence. Poster to be presented at the Annual Meeting of the International Society for Traumatic Stress Studies. Montreal, Canada.
- Matlow, R. B. & DePrince, A. P. (2009, November). *The influence of victimization history on symptom expression.* Poster presented at the 25th Annual Meeting of the International Society for Traumatic Stress Studies, Atlanta, GA.
- DePrince, A.P. et al. (2009). A preliminary examination of case, individual, and spatial characteristics in a sample of women exposed to intimate partner violence. Poster presented at the Annual Conference of the National Institute of Justice. Washington DC.

Manuscript in preparation

As of this writing, at least 5 additional manuscripts are in preparation.

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