THE ROLE OF BATTERERS' TREATMENT IN RECIDIVISM BY DOMESTIC VIOLENCE OFFENDERS

By

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Abstract

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RECIDIVISM BY DOMESTIC VIOLENCE OFFENDERS

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In this study I examined the role of a batterers' treatment program relative to other factors that influence the likelihood that a domestic violence offender will be arrested for further violence. Then I looked at factors that best predicted attrition from the program. I sampled 101 program participants from the men who did intakes in one batterers' program in Alaska. Using Random Forest, I modeled recidivism (re-arrest for violent offences after last contact with the program) and attrition (dropping out during the program) using 27 factors known to be correlated with domestic violence.

Of the men who completed the batterers' intervention program, 20% went on to be arrested for a violent crime, compared to 41% of those who did not complete. The recidivism model was able to correctly predict re-offense 60% of the time. The top predictors in this model were the number of days since last contact with the program, whether the participant had committed any violent offenses during the program, and whether the participant had completed the program. The fact that program completion and attendance variables out-performed the rest of the 27 predictors found in the literature to relate to recidivism provides evidence in support of the effectiveness of the program.

The attrition model classified program completion correctly 68% of the time. The top predictor that someone would drop out was race (particularly AK Natives), followed by whether the client was abused as a child, the number of prior offences on their record, and the charges for which they were ordered to the program. This model can be used to inform program efforts to increase retention by targeting interventions targeted to those at highest risk of dropping out and by improving cultural responsiveness.

Acknowledgements

I would like to acknowledge the guidance and support of my Master's Project Committee: Dr. Jen Maguire, Dr. Ronnie Swartz, Brenda Stanfill, and Lisa Hay. Each of these people contributed to the conception, development, and presentation of this project. I would also like to acknowledge the batterers' treatment program participants whose experiences inform this analysis, and the victims who were hurt by their violence. The numbers described here reflect the lives of people who have been affected by violence, and of men who have come to the program in an effort to better their lives for themselves and their families. I hope that this work contributes to increased efficacy in providing services to people who seek to find alternatives to violence and to break the cycle of violence and abuse in their lives.

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Introduction

Most states mandate domestic violence offenders to some form of batterers' intervention, often at great cost of money and time. There is disagreement in the field of batterers' intervention over what approach is best and over whether any approach actually works to reduce the likelihood that an individual who has used violence in relationships will continue to be abusive (Dutton & Corvo, 2006; Dutton & Corvo, 2007; Gondolf, 2007; Lehmann & Simmons, 2009).

I examined one of the state-approved alternatives to violence programs in Alaska. Many people who commit violent crimes are ordered to attend an alternatives to violence program, but there is question at the state and local level about how effective this program is at making our communities safer. This uncertainty influences referrals by the court and funding by the state. This study is the first to attempt to assess the influence of this program on domestic violence recidivism of program participants.

In the State of Alaska, 48% of women report having been the victims of intimate partner violence (IPV), 37% of sexual violence, and 59% of women report having experienced either IPV, sexual violence, or both (Rosay, 2015). The rates of sexual violence in Anchorage and Fairbanks, two of Alaska's three largest cities, are more than twice the national average for metropolitan areas (Casserly, 2012), with 30% of women in Anchorage reporting an experience of sexual violence in their lifetimes, and 32% of women in the Fairbanks North Star Borough reporting sexual violence (Rosay, 2015).

These numbers contribute to these two cities being considered two of the three most dangerous cities in the U.S. for women (Casserly, 2012).

The program I assessed does not adhere to either of the two major models of batterers' intervention, the Duluth Model or the therapeutic model (Dutton & Corvo, 2006, 2007; Gondolf, 2007; Lehmann & Simmons, 2009). Rather, like most current batterers' programs, this unique curriculum incorporates elements of the feminist-cognitive-behavioral Duluth Model and the more diverse and flexible therapeutic models of batterers' intervention (Lehmann & Simmons, 2009; Tolman & Edleson, 1995). Like many programs, it incorporates skills training, cognitive-behavioral approaches, gender role re-socialization, building awareness of control tactics, and recognition of childhood trauma that may influence adult violence (Saunders, 2008). The curriculum has been developed by the director, a licensed clinical social worker, over her 20 years of working in batterers' intervention, incorporating lessons from the literature of batterers' intervention and from her own experience. With this approach the program attempts to reach as many people as possible and to support them to successfully complete the program and reduce the use of violence in their lives.

Many people have reviewed the efficacy of various batterers' intervention programs (Babcock, Green, & Robie, 2004; Bennett, Stoops, Call, & Flett, 2007; Gondolf, 2004; Labriola, Rempel, & Davis, 2005; Lehmann & Simmons, 2009). Regardless of the model used (Duluth Model or therapeutic models), effect sizes have been small or non-existent (Babcock et al., 2004; Bennett et al., 2007; Gondolf, 2004; Labriol et al., 2005; Lehmann & Simmons, 2009). Further, it is difficult to interpret

results, as true randomized controlled studies are rare (Gondolf, 2004; Labriola et al., 2005; Lehmann & Simmons, 2009).

The current study, like many previous studies, is descriptive rather than experimental. This approach was chosen because a true randomized control trial was not possible, and a quasi-experimental study design would overestimate the efficacy of the program if men who are more likely to comply with the court order and complete the program are also inherently less likely to re-offend (Babcock & Steiner, 1999; Cadsky, Hanson, Crawford, & Lalonde, 1996; Feder & Wilson, 2005; Gondolf, 1997). However, it is possible to make inferences about likelihood of re-offense, what factors are the best predictors of re-offense, and how program completion or attendance rank among these predictors.

Estimates indicate that 40-66% of program participants drop out of batterers' intervention programs (Babcock & Steiner, 1999; Olver, Stockdale, & Wormith, 2011), so it is valuable to look at the characteristics that put a person at risk of failing to complete the program. A strength of the current study is the examination of personal characteristics as they relate to likelihood to complete the program and likelihood to commit future violent offenses. This information will be useful in selecting the best treatment approach, as treatment can be targeted to more effectively reach those program participants who are at higher risk of dropping out or re-offending (Cadsky et al., 1996; Olver et al., 2011). By identifying the issues that correlate with failure to complete the program or likelihood to re-offend, we can focus on those additional supports that will most improve the program.

Researcher positionality

I come to this project as an employee of this program for the past two years. Prior to my work with domestic violence offenders, I worked for almost six years with domestic violence survivors in an emergency shelter and transitional living program. Because of my work experience, I am acutely aware of the safety issues faced by survivors of domestic violence, and have experience with the implementation of batterers' intervention in practice. As a member of the community, I am also very concerned with the extremely high rates of violence against women in our community and am personally committed to making our community safer. My interest in this project is in supporting the batterers' program to be as effective as possible, and to provide concrete evidence to inform decisions by funders at the state level and by the court system as they make referrals. I have taken steps to be accountable to my community by including both the director of the batterers' program and the executive director of the local domestic violence victims' services agency on my committee, so that they are both intimately involved in the development of this project and the interpretation and use of the results. This work is done with utmost respect to the men who have been through the program and whose life experiences inform this analysis. Their experience makes possible this analysis which hopefully will improve services to future program participants, so that more families will experience healing and find ways to move forward free of violence and abuse in their homes.

Models of batterers' intervention

There are two major models for batterers' treatment programs. The original model is called the Duluth Model after the Domestic Abuse Intervention Program that pioneered it in Duluth, Minnesota. This model uses an educational approach in all-male groups to challenge belief systems that support gendered power dynamics (Pence & Paymar, 1993). The Duluth Model does not consider domestic violence to be a sign or symptom of mental illness and therefore is educational rather than therapeutic (Pence & Paymar, 1993). Feminist principles are integrated into a cognitive behavioral approach that identifies and challenges beliefs that support male power over women, and therefore gendered violence (Pence & Paymar, 1993). The Duluth Model relies on confrontation of abusive beliefs and behaviors and re-education with prosocial beliefs and new skills to bring about change (Pence & Paymar, 1993). Acts of violence revealed in the group are reported to the court system (Pence & Paymar, 1993). This model centers batterers' intervention groups in a Coordinated Community Response that includes cooperation between law enforcement, the district attorney's office, the court system, and court-mandated group programs, which work together to hold offenders accountable and promote changed behaviors (Pence & Paymar, 1993). This is the dominant model to which other intervention approaches are typically compared (Lehmann & Simmons, 2009).

A second generation of therapeutic batterers' programs has developed over time. This is in response both to questions about the efficacy of the Duluth Model in preventing

future violence, and in ideological challenges to the gendered analysis that underpin the model's interpretation of the causes of domestic violence (Dutton & Corvo, 2006; Dutton & Corvo, 2007; Gondolf, 2007; Lehmann & Simmons, 2009). There are a variety of therapeutic approaches being practiced in batterers' treatment programs, including Solution-Focused Brief Therapy (Lee, Uken, & Sebold, 2009), Motivational Interviewing (Dia, Simmons, Oliver, & Cooper, 2009), Narrative Therapy (Augusta-Scott, 2009), Cognitive-Behavioral Therapy (Eckhardt & Schram, 2009; Hamberger, 1997; Saunders, 1996), the Broaden-and-Build Theory of Positive Emotions (Garland & Fredrickson, 2009), the Good Lives Model (Langlands, Ward, & Gilchrist, 2009), conjoint groups (including the batterer and victim in group together) (Dunford, 2000; Stith, Rosen, McCollum, & Thomsen, 2004), Supportive Group Therapy (Morrell, Elliott, Murphy, & Taft, 2003), Dialectical Behavioral Therapy (Fruzzetti & Levensky, 2000), and couples therapy (Stith et al., 2004). These models emphasize a therapeutic relationship between the facilitator and the client, and attempt to bring research on therapeutic approaches that have succeeded in other areas of therapeutic intervention to bear on the issue of intimate partner violence (Lehmann & Simmons, 2009). Most therapeutic batterers' programs utilize a group format; a review of programs reported that 5% of the programs they examined offered individual therapy and 13% offered couples therapy (Saunders, 2008).

While a variety of approaches to intervention with people who use violence are being utilized, no particular approach has emerged as most effective in reducing future violence (Babcock et al., 2004; Gondolf, 2004; Labriola et al., 2005; Lehmann &

Simmons, 2009; Saunders, 1996). Studies have not provided clear evidence whether batterers' treatment reduces recidivism.

Efficacy of batterers' treatment programs

Meta-analyses have quantitatively summarized the findings of a selection of the most rigorous studies of batterer treatment program effectiveness. Babcock and co-authors (2004) analyzed the results of five randomized trials and 17 quasi-experimental studies with no true controls. They found that batterers' intervention programs based on the Duluth Model reduce recidivism, with small effects, estimating a 5% reduction in violence could be attributed to the batterers' intervention programs.

Feder and Wilson (2005) also reviewed the same five randomized trials, but they included only quasi-experimental studies that used matched-group or statistical controls for differences between their comparison groups. They found a moderate effect of batterers' treatment on re-arrest, but using reports by victims of re-offense, there was no treatment effect. Further, they found a small harmful effect of treatment in quasi-experimental studies that used a no-treatment comparison. There was a large positive treatment effect demonstrated in quasi-experimental studies using people who dropped out of treatment for the comparison group. Because this result was so different from the results of more rigorous studies, the authors suggest that this raises concerns that many quasi-experimental studies have over-estimated the effectiveness of batterers' treatment programs.

There are a few published randomized control trials that have studied the efficacy of batterer's treatment programs. The most rigorous is likely the study by Dunford (2000). In this study of men in the Navy who committed domestic violence offenses, Dunford randomly assigned more than 800 couples to one of four groups: a men's treatment group (CBT-based with teaching elements focused on gendered violence), conjoint groups (same curriculum), rigorous monitoring (individual counseling with monthly victim safety checks), or control (safety planning with victims only). After a period of one year of treatment and another six months of follow-up, Dunford found no significant effect of any of the treatment groups. He also found extremely low recidivism for all categories, which has been attributed to the characteristics of the men in the study, who were all in the Navy, and had been screened to exclude people with chemical dependency or significant mental health problems.

Two other randomized controlled studies also found no effect of batterers' treatment (Feder & Dugan, 2002; Labriola et al., 2005). In Feder and Dugan's (2002) study, 404 male participants were randomly assigned to a batterer's program along with probation, or just to probation. Using criminal records, offenders' self-reports, and victims' reports, they found no significant difference in re-offense after 12 months follow-up. Labriola, Rempel, and Davis (2005) randomly assigned participants to one of two different batterers' programs (one using the Duluth Model, one incorporating Duluth plus cognitive behavioral treatment) along with judicial monitoring, or to only monitoring. They found no effect on re-arrest after 18 months follow-up.

In 1992, Palmer, Brown, and Barrera conducted a study in which offenders were court-ordered to a 10-week psychoeducational group, or to a control group with no treatment. At 16-18 month follow-up, they found that recidivism based on police reports was lower for those in treatment than the no-treatment control.

Taylor, Davis, and Maxwell (2001) reported differing results in their initial publication and in a re-analysis of their data nine years later (Maxwell, Davis, & Taylor, 2010). In their study, offenders were randomly assigned to batterer treatment or to a no-treatment community service control group. After a 12 month follow-up period, they found a significant reduction in recidivism (Taylor, Davis, & Maxwell, 2001). However, there was some concern that judges had over-ridden the random assignments in 30% of the cases, so that offenders that were perceived to be higher risk by the judges were assigned to batterers' treatment in many cases.

In their re-analysis of their data, Maxwell, Taylor, and Davis (2010) addressed another perceived weakness in their initial analysis. In the initial study, they did not distinguish between an offender being assigned to treatment, and an offender actually attending treatment. Only 39% of the people who were ordered to the treatment actually completed it, and 27% never started it. When data were re-analyzed based on the number of sessions attended, they found a small reduction in new incidents. However, this reduction did not persist past the completion of treatment, whether the participants attended an 8-week or a 26-week program. They concluded that participating in the program suppressed bad behavior, rather than influencing the way participants thought or their long-term behavior (Maxwell, Taylor, & Davis, 2010). This finding, however, is

contradicted by the results of a 15-month follow-up study of more than 800 participants in four programs by Gondolf (1997), who found that re-offenses were most common at 3 months, while participants were still in treatment.

The studies described above are the most rigorous studies to date of the effectiveness of batterers' treatment programs. There is no real consensus on how these programs influence recidivism. One point illustrated by this work is the difficulty in accurately assessing the influence of batterers' treatment programs on future violent behavior.

Factors related to recidivism

A number of studies have attempted to identify factors related to recidivism. If we can identify the men at highest risk of re-offending, we can target our interventions to meet their needs. Younger age (Bennett et al., 2007; Feder & Dugan, 2002; Labriola et al., 2005), use of illegal drugs (Bennett et al., 2007), frequency of alcohol use (Bennett et al., 2007), referral or court order to treatment for substance use issues (Gordon & Moriarty, 2003; Shepherd, 1992), in treatment for chemical dependency (Shepherd, 1992), unemployment (Feder & Dugan, 2002; Labriola et al., 2005), not living with a partner (Labriola et al., 2005), dropout from batterers treatment (Bennett et al., 2007, Gondolf, 1997), attendance at fewer treatment sessions (Gordon & Moriarty, 2003), prior criminal history (Labriola et al., 2005; Shepherd, 1992), more serious current arrest charges (Labriola et al., 2005), and history of childhood abuse (Shepherd, 1992), have all been found to positively relate to recidivism.

Factors related to attrition

A large percentage of people who begin batterers' treatment programs do not complete them, with estimates of up to two thirds attrition (Babcock & Steiner, 1999). If treatment is to be effective, we must retain more people in treatment. A number of characteristics of the individuals in treatment have been correlated with dropping out, including longer domestic violence criminal history (Babcock & Steiner, 1999; Gordon & Moriarty, 2003), younger age (Feder & Dugan, 2002), less education (Babcock & Steiner, 1999), unemployment (Babcock & Steiner, 1999; Bennett et al., 2007; Feder & Dugan, 2002), lower income (Babcock & Steiner, 1999), unmarried status (Bennett et al., 2007), non-white race (Babcock & Steiner, 1999), non-Latino ethnicity (Bennett et al., 2007), and lack of motivation to change (Bennett et al., 2007). Using techniques to build the therapeutic alliance early and targeting services to serve these populations may help to prevent attrition (Dia et al., 2009; Tolman & Edleson, 2010).

Methodology

Study population

I sampled from all of the men who did intakes at the program from January 1, 2007, through June 30, 2015. People who had contact at the program after June 30, 2015 were excluded from the analysis, so that there would be at least a 6-month period after the last program contact from which to estimate recidivism. A sample of 101 participants was randomly selected from this population to be included in the analysis.

Predictive factors

From the information program participants reported in their intakes, I recorded age, race, last grade of school completed, employment status, military service (yes or no), housing status (housed or no), whether or not the participant lived with their partner, history of substance abuse, current use of illegal drugs, frequency of alcohol use, history of treatment for substance abuse, history of childhood abuse, most serious current arrest charges, and referral source (court order, Office of Children's Services, Child Custody Investigator, voluntary). From the Alaska Court View website (http://www.courtrecords.alaska.gov/), which makes publicly available criminal histories for the State of Alaska, I recorded the number of prior violent offenses, number of prior criminal offenses, number of minor offenses, and most serious past offense, for each participant. From agency records I also recorded the number of treatment sessions the

participant attended, the number of times the participant completed the program, the number of times the participant restarted the program, and the number of days since the last class attended.

Response variables

In the model predicting recidivism, for the response variables I used the number of violent offenses in the State of Alaska since the participant's last contact with the program. I obtained this information from the Alaska Court View website (http://www.courtrecords.alaska.gov/). In the model predicting attrition from the program, I used program completion as the response variable.

A novel approach to analyzing the data

This study of an Alaskan alternatives to violence program faces many of the same challenges faced by other program evaluations. The biggest challenge is the difficulty in attaining a control group to assess treatment effects (see discussions in Feder & Wilson, 2005; Gondolf, 2004). Without the ability to assign participants to treatment or control groups, the best comparison we can do is a quasi-experiment comparing program completers to people who dropped out of treatment. Because the factors related to attrition overlap substantially with the factors related to recidivism, it is very difficult to determine whether any differences in recidivism can be attributed to the batterers' treatment.

To address this problem of correlated variables, I did a descriptive analysis utilizing a machine learning technique called Random Forest (Brieman, 2001). I created classification models of DV arrests that occurred after treatment, selecting from a list of individual predictors that have been found to relate to recidivism, with the number of treatment sessions and whether the participant completed treatment among the predictors. I also created classification models of program completion, selecting from the same 27 predictors, which have been found to also relate to attrition.

Machine learning techniques are growing in popularity, but they are still less commonly used than frequentist statistics for data analysis. The Random Forest program has improved on previous decision tree modeling programs by creating "forests" of classification trees to make predictions (Breiman, 2001; Svetnik et al., 2003). In other words, it creates a large number of trees, using different subsets of the data and of the predictor variables, and predicting to the data left "out of the bag," and uses this information to select the model that produces the most accurate predictions of "out of the bag" data. The random sampling of predictors to build decision trees allows Random Forest to independently assess correlated predictor variables, which are typically ranked approximately equally (Svetnik et al., 2003). This is helpful when there is not a clear mechanistic reason to eliminate a particular correlated predictor variable (Hochachka et al., 2007). Regression trees can allow for non-linear relationships between predictors and response variables, and permit multiple interactions between predictors, making them particularly suited to high-dimensional data in complex systems (like predicting human behavior), and avoiding over-fitting the model (De'ath & Fabricius, 2000; Hochachka et

al., 2007; Svetnik et al., 2003). Random Forest has been used in other studies of various aspects of domestic violence to make predictions using large data sets with many correlated variables (Berk, He, & Sorenson, 2005; Teicher & Vitaliano, 2011; Tomoda, Polcari, Anderson, & Teicher, 2012).

This novel approach to analyzing the data brings a new tool to address the challenge of assessing the contribution of batterers' treatment to reducing assaultive behavior. In addition to informing decision-making in Alaska regarding the efficacy of this program, I hope that this will contribute to the larger effort to understand the role of batterers' intervention programs in creating safer families and communities.

Predictive models

I modeled recidivism and program attrition using the 'Random Forest' package version 4.5-28 in R (Breiman, 2001; Liaw & Wiener, 2002; Svetnik et al., 2003). Random Forest ranks the top predictors for the model. Model improvement ratios were calculated based on the mean decrease in prediction accuracy when the predictor is randomly permutated. To visualize the relationships between predictors and recidivism or attrition, I use partial dependence plots to show the marginal effects of top predictive variables on the classification of the response variables. Partial dependence plots show the value of the response variable as the value of the predictor is changed over the range of values for that variable.

Results

Recidivism model

Of the people in my sample who completed the batterers' intervention program, 20% went on to be arrested for a violent crime. Of participants who did not complete the program, 41% re-offended.

The recidivism model was developed to predict whether or not a program participant would be arrested for a violent offence after program completion. This model was able to predict recidivism with a 40% error rate. The top predictors in this model were the number of days since last contact with the program, whether the participant had committed any violent offenses during the program, and whether the participant had completed the program (Figure 1).

Participants were more likely to re-offend as time went by since they had completed the program (Figure 2). Participants who committed violent offenses while they were in the program were more likely to re-offend once they were out of the program. People who completed the program were less likely to re-offend than those who dropped out.

Attrition model

The model predicting who would drop out of the program made predictions with a 32% error rate. The top predictors of attrition were the participant's race, whether the

participant was abused as a child, the number of past minor offenses in the criminal record, number of past criminal offenses in the criminal record, current charge for which the participant was ordered to the program, and the number of past violent offenses (Figure 3).

Alaska Native clients were most likely to drop out of the program (Figure 4). They were followed by clients of mixed Alaska Native / white race, mixed Alaska Native / black, and mixed Alaska Native / American Indian / white races. Next most likely to drop out were clients who were white, American Indian, or Hispanic. Clients who were abused as children were more likely to complete the program. Clients with more past minor offenses and past criminal offenses were more likely to complete the program.

Figures

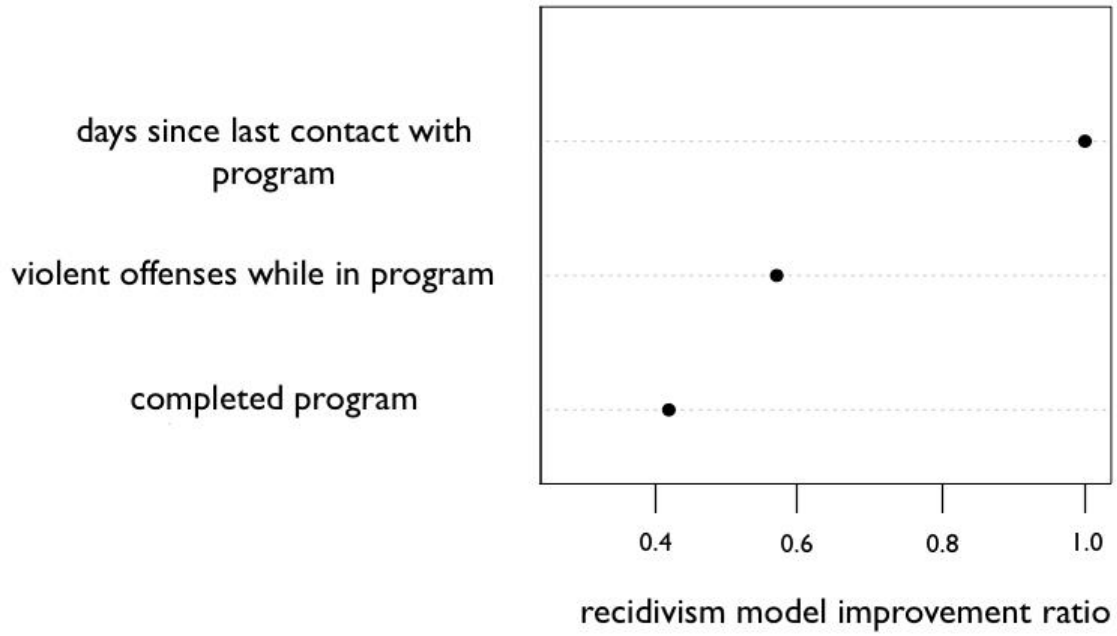

Figure 1. Top factors predicting whether or not a program participant would commit another violent offense.

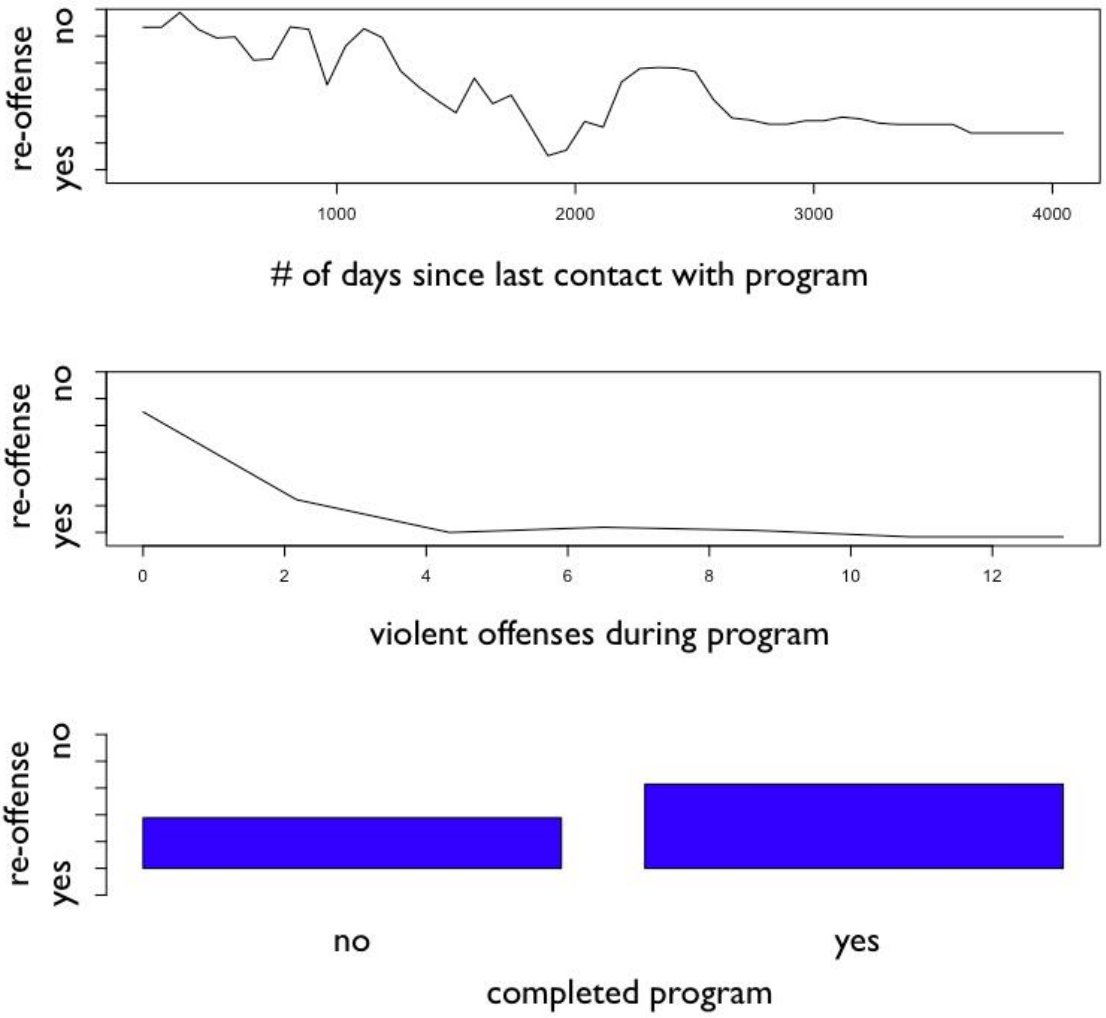

Figure 2. Partial effects of top predictors on model of whether program participants committed future violent offenses.

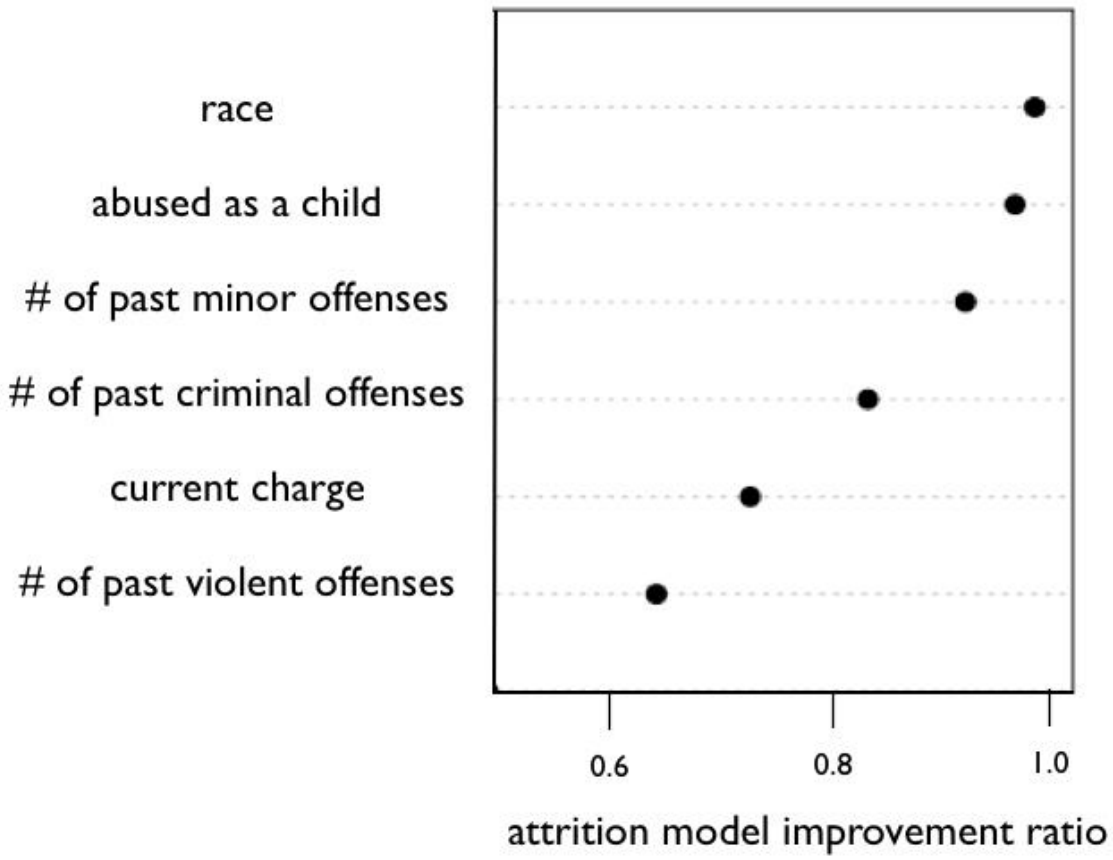

Figure 3. Top predictors in the model that predicted attrition from the batterers' intervention program.

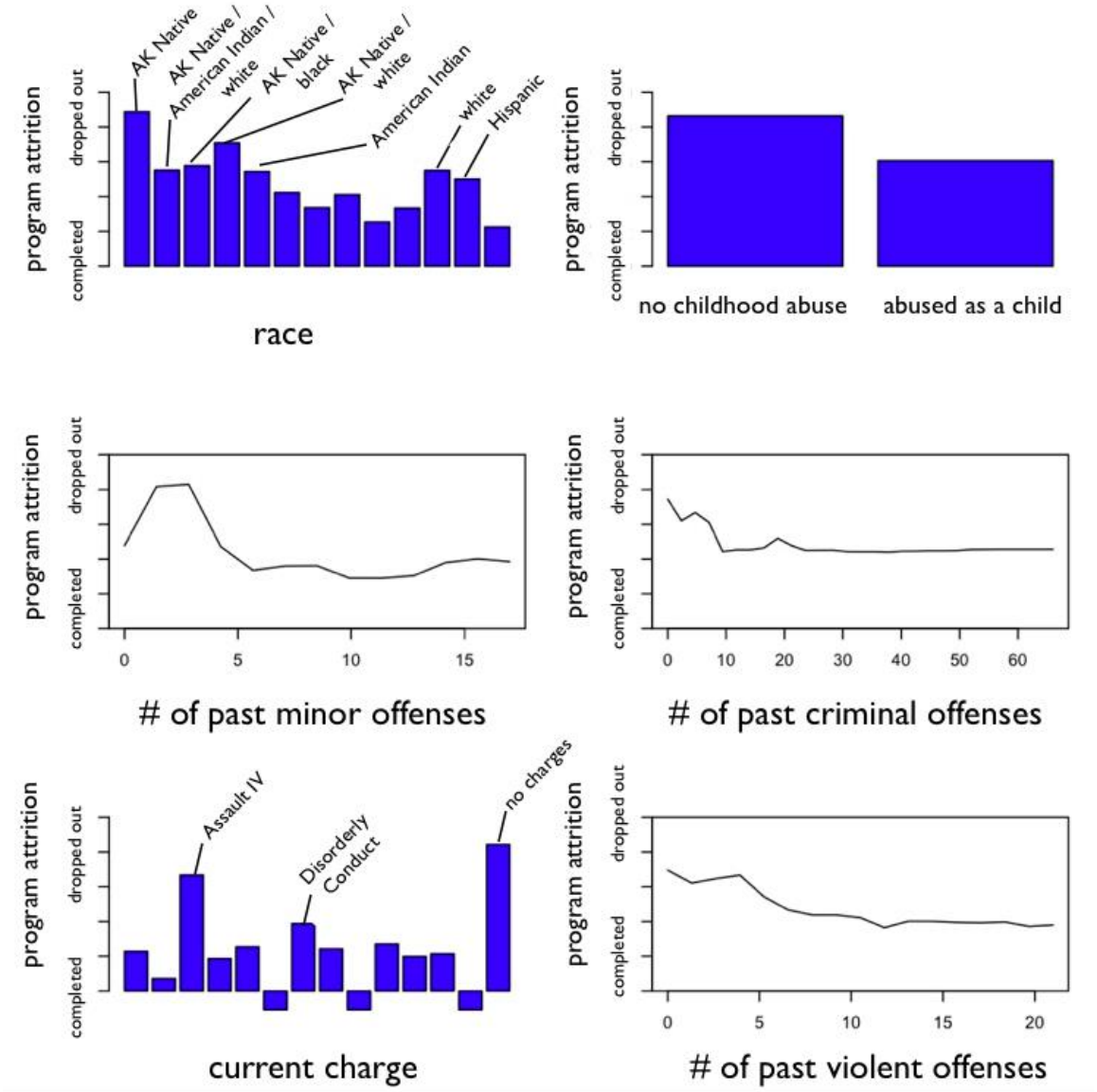

Figure 4. Partial plots of the effects of top predictors for the model prediction program attrition from a batterers' intervention program.

Discussion

Recidivism models

Re-arrest rates were lower among people who completed the program (20%) than those who dropped out (41%). This is consistent with the findings in other quasi-experimental studies of recidivism (Babcock et al., 2004; Feder & Wilson, 2005). However, the design of this study means that program completion is confounded with other variables that may reduce recidivism (Babcock & Steiner, 1999; Cadsky et al., 1996; Feder & Wilson, 2005; Gondolf, 1997).

The recidivism model classified outcomes correctly 60% of the time. This model indicated that people were more likely to reoffend as greater time elapsed since their last contact with the program (time since completion varied from six months to eight years in this sample) (Figure 2). This suggests program effects decline over time. Re-offense rate increased until it peaked around five years post-completion, after which it leveled off (Figure 2). This relationship supports the intervention by the criminal justice system, specifically attendance at the program, as impacting behavior, since general rule-following behavior that might be confounded with program completion would not be expected to decline over time. Ongoing contact or refresher contact for those five years would help support clients to prevent this loss of program effectiveness over time. People who committed violent acts while in the program were more likely to reoffend than those who did not (Figure 2). These participants have encountered some barrier to successfully applying the material to their lives. It would be informative to explore what barriers these

are in future research. Completing the program was a top predictor, with program completers less likely to be arrested after their last contact with the program (Figure 2).

While it is impossible to attribute reduced recidivism among program completers to the effects of the program with our study design, the fact that program completion and attendance variables out-performed the rest of the 27 predictors found in the literature to relate to recidivism provides evidence in support of the effectiveness of the program. This is further supported by the increase in recidivism with time since last contact with the program, as other confounding variables are not expected to change consistently over time.

Attrition model

The model predicting attrition classified program completion correctly 68% of the time. This model can be used to inform program efforts to increase retention by reaching out with interventions targeted to those at highest risk of dropping out.

The high correlation between race and attrition is not unique to this program (Figure 3); it is common among batterers' programs for attrition to be higher among clients who are not white (Babcock & Steiner, 1999; Williams & Becker, 1994). Clients who were Alaska Native, or of mixed race but part Alaska Native heritage, were at highest risk of dropping out (Figure 4). Efforts should be made to improve cultural relevance of this program to better serve Alaska Native clients, who make up a large proportion of the clients served by this program (31% of this sample population identified themselves at least in part as Alaska Native or American Indian).

Participants who disclosed on their intakes that they had experienced abuse as children were less likely to drop out than people who had not (Figure 4). The reason for this cannot be inferred from this data, but there are several possible explanations. Willingness to disclose this information about their childhoods on an intake session indicates a greater openness to the program. The approach of the program frequently references experiences of victimization as children to help participants develop empathy for their victims or to explore the origins of the beliefs they use to justify violence. People who have experienced child abuse might find it easier to connect to the material. Further exploration is required to interpret this result. Without understanding the reasons for this relationship, it is difficult to address the fact that people who were not abused as children are more likely to drop out.

People with fewer offenses on their criminal history (minor offenses, total criminal offenses, and violent offenses) were more likely to drop out (Figure 4). This contradicts findings of other studies, which found that longer domestic violence criminal history (Babcock & Steiner, 1999; Gordon & Moriarty, 2003) was positively related to attrition. Participants whose current charge was an Assault IV or a Disorderly Conduct charge, or participants who were not referred on criminal charges, were also more likely to drop out (Figure 4). The high rate of attrition for participants who were there without criminal charges indicates that voluntary clients were more likely to drop out. However, the higher rates of attrition by people who were court-ordered for an Assault IV or a Disorderly Conduct charge could be a consequence of the way enforcement of court orders to alternatives to violence programs is handled in our community. It is common

for non-compliance with the court order to attend the program to go un-addressed unless the offender gets into further legal trouble. However, people with more offenses, or more serious offenses, are often ordered to the program on multiple cases, and under supervision by probation officers, and therefore there is greater enforcement to compel them to complete the program.

Recommendations to reduce attrition

Attrition related to race seems like the area where the program could have the greatest influence on improving retention. Research supports some interventions for improving cultural competency (Oden, 1995; Saunders & Hamill, 2003; Williams & Becker, 1994). One major barrier to program completion for many Alaska Native program participants is the lack of available treatment options in rural areas, requiring them to live away from their home villages in an urban center for the duration of the 36-week program. Making the program available to people in their home villages is necessary to improve completion rates by Alaska Native men from rural areas. A variety of possible solutions exist, including training local people to offer services, providing distance delivery of services, or providing supportive funds for travel from villages to receive services in town while living in a rural area. Each of these solutions comes with its own significant challenges. Utilizing technology to provide on-line delivery of groups to rural areas from a regional hub shows the most promise of these options in terms of resources required.

The program should look to local tribal domestic violence services for training on traditional Native values and beliefs about violence and women's roles (Matamonasa-

Bennett, 2013; Mending the Sacred Hoop Technical Assistance Project, 1995; Oden, 1995; Williams & Becker, 1994). The role of historical trauma and internalized oppression in today's violence against women in Native communities needs to be acknowledged throughout the program (Mending the Sacred Hoop Technical Assistance Project, 1995; Oden, 1995). Institutional racism experienced by men who are not white when they interact with our criminal justice system should also be acknowledged in programming (Saunders & Hamill, 2003). The widespread violence experienced in Native communities must be openly addressed, as this tends to normalize violence and influence beliefs about violence by Native men (Oden, 1995). The program could reach out to the Native community to involve Native elders in groups or programming (Matamonasa-Bennett, 2013; Williams & Becker, 1994). They could incorporate dialogue about traditional beliefs and cultural values of the participants into the group sessions (Oden, 2007; Saunders & Hamill, 2003). Relationship-building with tribal leaders would improve community support for the program in Native communities (Oden, 2007). These are some efforts that are likely to improve program completion rates by Alaska Native clients.

Higher attrition by people who have committed fewer and less serious crimes will need to be addressed at a community level. The results of this study support the efficacy of the program; accountability to keep court-ordered clients attending until they complete the program is needed to allow those clients, and our community, to benefit from the program. Therefore, it would benefit our community to put systems in place to assure this accountability. Higher attrition by voluntary clients suggests that increased efforts to

engage voluntary clients may be necessary to keep them coming for the duration of the long and expensive program.

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