Testing a violence-prevention intervention for incarcerated women using a randomized control trial

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Abstract

Objective: Beyond Violence (BV), a new prevention program for women with assaultive offenses, demonstrated feasibility in previous studies. This study’s purpose is to assess the efficacy of BV using a randomized control trial. Methods: Eligible women were randomly assigned to treatment as usual (TAU) and the experimental condition (BV). Measures of mental health and anger were administered to women at pre and post intervention. Results: Outcomes reveal positive changes for both groups. Significant between group differences favor BV on measures of anxiety and anger. Moreover, BV is cost effective with only 20 sessions compared to 44 sessions for TAU. Conclusions: The demonstrated effectiveness of BV is promising for this underserved population of women. Next steps: Replication and assessing long-term outcomes.
Introduction

Interventions for women who engage in violent behavior are rare and there has been little evidence demonstrating efficacy for any such intervention. ‘Beyond Violence’ (Covington, 2013) is a new violence-prevention intervention for women convicted of violent offenses such as assault, homicide, robbery and sexual offenses. This study builds on previous research documenting the development, feasibility and pilot testing of Beyond Violence (BV) delivered within a specialized treatment unit of a Midwestern state prison for women (Authors, 2013: Authors, 2012). The results of these pilot studies were positive and led to the next step in the intervention research paradigm. Fraser and colleagues (2009) suggest that after problem identification, program design and pilot testing are completed, the process of assessing efficacy in a variety of settings is the subsequent step. To continue with efficacy testing, this study uses a sample of women with violent offenses in the general population of a state prison and compares the outcomes of BV to the treatment as usual, Assaultive Offender Programming (AOP). Specifically, the short-term outcomes of interest in the between group comparison include measures of mental health and anger.

The existing treatment, AOP, is an intervention created for male offenders, but used with female offenders, for which there is no previous evidence of efficacy – in either male or female populations. The general population in prison, as opposed to the specialty treatment unit, is the setting where most inmates are housed and where the intervention will likely be used across the country. Therefore, this study assesses the ‘ecological validity’ (Brunswik, 1956; Brewer, 2000) and short-term outcomes of BV while also comparing it to an existing intervention.
Background

Women comprise approximately 24% of all arrests within the U.S., but represent only 3% of arrests for violent offenses (Snyder, 2011). Violent offenses are defined as those that involve force, or threat of force, and include offense types such as homicide, robbery, assault and sex offenses. Sentences for violent offenses include community supervision (i.e. probation), short-term incarceration in local jails, or long term incarceration in state prisons depending on the seriousness of the offense and degree of harm caused. However, within women’s prisons, those convicted of a violent offense are the majority population (34%), due to their longer sentences (Guerino, Harrison, & Sabol, 2011). Women with a history of violent offenses also have a 49% rate of recidivism, mainly with drug-related crimes (Deschenes, Owen, & Crow, 2007).

Although a small proportion of women participate in repeat violent offenses (Deschenes, Owen, & Crow, 2007; Verona & Carbonell, 2000), women engaging in violent behaviors are at high risk of serious injuries and major depression (Tjaden & Thennes, 2000).

Context and Correlates of Women’s Violence

Women’s use of violence differs from men’s use in regards to frequency, motivation, and relationship to victim. Of adults within the criminal justice system, women comprise a much smaller proportion of those arrested (14%) and sentenced (5%) for violent offenses (West, Sabol, & Greenman, 2010). When examining the common motivations for women’s and men’s violence, gender differences exist across studies (Pollock & Davis, 2005; Kruttschnitt, 2002; Mann, 1990; Mann, 1996); in general, women are more likely to report violence as a mechanism of self-defense or as a response to their partners’ violence, whereas men report motivations of dominance and control (for a review, Hamberger, 2005). Research about women as perpetrators of violence confirms that these same women are also commonly victims of intimate partner
violence (Swan, Gambone, Caldwell, Sullivan, & Snow, 2008). Lastly, women are more likely to have a relationship with their victim than men (Greenfeld & Snell, 1999; Pizarro, DeJong & McGarell, 2010).

Women involved in the criminal justice system present with high rates of risk factors associated with violence, including mental health issues, substance use, unhealthy anger expression, and trauma histories. Mental health disorders are more common for incarcerated women than incarcerated men, with rates almost double for women (Kubiak, Beeble & Bybee, 2010; Gunter et al., 2008; James & Glaze, 2006), and are associated with women’s use of violence (Logan & Blackburn, 2009; Silver, Felson, & Vaneseltine, 2008). Between 75% and 90% of incarcerated women have a substance use disorder which is higher than rates found for their male counterparts (Fazel, et al., 2006; Kubiak, Boyd, Slayden, & Young, 2005; Staton, Leukefeld, & Webster, 2003), and is also linked to women’s perpetration of violence (Weizmann-Henelius, Putkonen, Naukkarinen, & Eronen, 2009; Dowd, Leisring, & Rosenbalm, 2005). Incarcerated women score higher on scales of types of anger, angry reactions, and anger expression, as well as lower on anger control than incarcerated males (Suter, Bryne, Bryne, Howells, & Day, 2002). Specifically, under-controlled anger expression is associated with women’s aggressive behavior (Swan et al., 2005). Similarly, victimization experiences associated with interpersonal violence are common among incarcerated women (Battle, Zlotnick, Najavits, Gutierrez, & Winsor, 2003; Green et al., 2005; Siegel & Williams, 2003; Jordan, Schlenger, Fairbank, & Caddell, 1996; Teplin, Abram, & McClelland, 1996; Sullivan, Meese, Swan, Mazure, & Snow, 2005) and more prevalent than among incarcerated men (Greenfeld & Snell, 1999). Moreover, histories of trauma are linked to women’s use of violence (Sullivan et.
Intervention Needs for Incarcerated Women with Violent Offenses

Differences between men and women involved in the criminal justice system demonstrate the need for gender-specific interventions (Bloom, Owen, & Covington, 2003; Fournier, Hughes, Hurford, & Sainio, 2011; Laux et al., 2008). However, models of treatment and rehabilitation for those involved in the criminal justice system are traditionally male focused or, at best, considered gender neutral (i.e. Ware, Cieplucha, & Matsuo, 2011). Moreover, there is an absence of empirically tested interventions specifically designed for incarcerated women (Moe & Ferraro, 2003). In a recent systematic review, none of the interventions for women in correctional settings were primarily intended for violence reduction and/or prevention, with the majority focused on substance abuse treatment (Tripodi, Bledsoe, Kim, & Bender, 2011). However, incarcerated women represent a distinct population in need of multifaceted interventions that consider gender differences in exposure to interpersonal violence and higher rates of mental health and substance use disorders. In this respect, multi-modal interventions are suggested for reductions in and prevention of violence (McGuire, 2008) and are greatly needed for this population of women.

In response to this need, Beyond Violence (BV) was developed as a gender-specific and trauma informed intervention for women with violent offenses within institutional settings (Covington, 2013). An intervention research paradigm (Fraser et al., 2009) guided the development and testing of this new intervention aimed at preventing further violent behavior in women who have already engaged in violence. In brief, BV uses trauma theory (Herman, 1992, 1997) as a foundation for the intervention with the basic tenant that early trauma influences both perceptions of and reactions to life events (Kendall-Tackett, 2000) and that exposure,
particularly early or ongoing exposure, to traumatic events can result in repressed anger (Neumann, Houskamp, Pollock, & Briere, 1996; Newman & Peterson, 1996; Springer, Sheridan, Kuo, & Carnes, 2007) and the use of alcohol and other drugs (Hedtke et al., 2008; Najavitis, Weiss, & Shaw, 1997). The BV curriculum was developed after an extensive review of existing interventions, focus groups conducted with likely participants, discussions with professionals (treatment and criminal justice oriented), and establishing a foundation in the ecological framework espoused by the World Health Organization for violence prevention (Dahlberg & Krug, 2002). BV utilizes a multimodal approach and a variety of evidence-based therapeutic strategies (i.e., psycho-education, role-playing, mindfulness activities, cognitive behavioral restructuring, and grounding skills for trauma triggers) to address issues of mental health, substance abuse, trauma histories, and anger regulation. This 20-session intervention, delivered by a trained professional, incorporates attention to women’s extant victimization history, gender socialization, and the likelihood of co-occurring substance use and mental health disorders. The curriculum content is organized into four modules: self, relationships, community, and society. (See Table 1 for a list of session titles within each module).

Fidelity to the intervention curriculum and feasibility of implementation within a prison setting are discussed extensively elsewhere (Authors, 2013). In summary, the women who participated in BV provided a positive reception for the intervention as voiced in a series of focus groups and as written confidentially in their session feedback forms. Participants received a high dosage (i.e., 90% of the women received 95% of the intervention) and staff were able to demonstrate fidelity to the intervention’s curriculum via weekly monitoring. Issues arising during the implementation within the prison setting were primarily related to session length interference due to disruptions by prison activities such as mandatory lock-down or drug testing,
and were addressed as they arose. Feedback on areas of the curriculum that women found problematic was used to modify subsequent drafts of the curriculum.

A pilot study of BV was conducted within the Residential Substance Abuse Treatment (RSAT) unit of a women’s state prison (Authors, 2012). RSAT is a 120 bed therapeutic unit in a state prison that holds nearly 2000 women. Although officers are assigned to the unit, most of the clinical staff members are contractual therapists who facilitate therapeutic and didactic group sessions as well as two individual sessions per person over the 6-month period. Women volunteer for placement in the RSAT unit and the intensive six-month treatment program offered. For the pilot testing of the intervention, women who volunteered for RSAT and had a violent offense were offered the BV intervention. A total of thirty five women participated in the pilot and demonstrated decreases in mental health symptoms, such as depression, anxiety, PTSD, and other serious mental illnesses with good effect sizes (Authors, 2012). These initial positive results led to further intervention testing with the specific goal of testing ecological validity for the intervention within the prison and outside of the RSAT unit.

Current Study

The current study examines and tests BV in the general population prison setting to see if similar positive short-term outcomes are found outside of the specialized treatment unit. Prisons generally have multiple housing units, and the general population units differ from the specialized treatment unit in several dimensions: physical location within the prison, unit policies and procedures, staff composition and perceived safety (see Kubiak, Boyd, Slayden & Young, 2007). In the specialized treatment unit, women volunteer for intensive treatment services and agree to adhere to a higher standard of rules than those in the general housing units. Moreover, the treatment unit is jointly staffed with therapists and corrections officers who are
trained in the therapeutic milieu. Feedback from women during the pilot testing revealed their perceptions of greater psychological safety within the therapeutic unit, as compared to the general population housing units (Authors, 2012). Since the therapeutic unit has so few beds and is considered a temporary assignment prior to discharge (i.e. only select women are allowed in this unit within 18 months prior to release), broad implementation of the BV curriculum would result in most women receiving the intervention while living in the general housing units. This led the researchers to question the feasibility and efficacy of the BV program among the women within the general housing units; in other words, the next step was clearly to test the ecological validity of the intervention. Ecological validity is a concept of testing and demonstrating that an intervention can be successfully carried out in the common and most likely applied setting (Brewer, 2000).

In addition, both the research and prison staff questioned how the positive outcomes of the experimental condition, BV, fare in comparison to the outcomes of the existing, untested treatment used in the prison. Assultive Offender Programming (AOP) is the current ‘treatment as usual’ (TAU) program required of both male and females convicted of a violent offense by the state’s department of correction. Individuals with a conviction for a violent offense are mandated to participate in AOP in the 24 months prior to release. Given that no evidence exists about treatment outcomes for this particular prison program or any other violence prevention program for incarcerated women, this study collected feasibility and outcome data for both BV and TAU in order to conduct multiple comparative analyses. Therefore, this study was designed to address three primary research questions: 1) What is the feasibility of delivering the BV intervention as compared to TAU within the general population units? 2) Do women engaging in violence prevention interventions (BV or TAU) facilitated within general population units experience any
change in mental health or anger symptoms over the course of the intervention?; and 3) What are the differences between groups (BV versus TAU) on mental health and anger outcomes?

Methods

Participant Selection

The sample was selected from the population of women in a Midwestern state’s only prison for women with a total population of approximately 2000 prisoners. The prison includes women of all ages and security levels (low, medium, high) in two building complexes joined by a common yard. Selection criteria for the intervention study included: 1) conviction of a violent offense as defined by Department of Correction (i.e., assault, robbery, homicide, and/or sex offense); 2) recommendation via intake assessment for violence prevention program; 3) substance abuse dependency diagnosis as determined by the department of corrections via the Substance Abuse Subtle Screening Inventory (SASSI; Miller, 1999) or an equivalent clinical or behavioral assessment of dependency (i.e. positive drug screen during incarceration); 4) within 24 months of earliest release date; 5) no serious mental health disorder requiring residence on specialized mental health unit; 6) Security Level low or medium; and 7) no previous attendance in the AOP or BV programming. Using these criteria, a computer generated list was created from information in the department’s management information system data warehouse.

Randomization and Treatment Allocation

A single-center, controlled, parallel group trial was designed, assigning women to receive one of two treatments, initially in 1:1 ratio. A sample size of 28 was chosen to be both feasible and capable of detecting medium-to-large within-condition changes and Condition x Change interactions. For repeated measures ANOVA, the planned N of 12 per condition (accounting for 15% attrition) had power of .8 to detect a medium (i.e., d=.6 SD) Condition x Time interaction.
Directional within-group t-tests for each condition were planned to have power of .83 to detect a large (d=.8 SD) effect size.

The computer generated a list of 52 names, which were then sorted by ‘earliest release date’ or ERD. As the ERD is the date that women would be eligible for prison release, we were motivated to include women in the first cohort who would be likely to be released from prison soonest. After sorting the list by ERD, the study principal investigator and prison deputy warden selected women alternatively for either group (i.e., woman #1 was assigned to BV, woman #2 TAU, woman #3 BV, etc.). Although the original list contained 28 women, some time delays in data entry resulted in erroneous information in the correction’s database that violated eligibility criteria (e.g. already received one of the programs). Oversampling for group members allowed for issues that might arise from non-consent or drop outs in the research process, but did not consider errors within the database as a potential impediment to sampling procedures. Two women were added after the initial randomization process from the generated list, but due to other scheduling difficulties, only 22 women were available in the modified list. Since it was not possible to allocate the initially planned number of women to each group, the allocation ratio was changed. When considering that AOP was an existing program, gaining more experience in the experimental condition motivated the research team to assign 12 women to BV and 10 women to the TAU. Even though balanced group sizes maximize a study’s statistical power, the use of unequal randomization ratios does not significantly reduce the power of a study if the ratio is not more than 3:1 (Pocock, 1995).

All (n=22) women consented to participate in the study. Three women did not complete their treatment group (2 women in TAU and 1 in BV) due to termination or voluntary removal. Post-tests were thus completed with 11 women in the BV group and 8 women in the TAU group,
for a total of 19 women (see Figure 1). No changes were made to the methods (e.g. the study’s instruments, procedures, or examined outcomes) after the study began.

**Procedures**

Prior to the start of the study in August 2011, a master-level research team member conducted a one hour session with each treatment group. The informed consent was provided to all women and verbally reviewed with the group by the research team member. Following confidential collection of the consent forms, the women were then invited to take the pre-test survey to establish a baseline for mental health and anger factors. Those not granting consent for participation were advised to return their surveys blank in an unmarked envelope so that they could not be identified as non-consenting by other group members. All procedures and forms were approved by the university’s Institutional Review Board and the department of corrections’ research department.

**Curriculum and Group Sessions**

BV is a 20 session program designed to systematically explore the interrelationship between substance abuse, trauma, mental health, and the role of violence in women’s lives – both as victims and perpetrators. The curriculum includes four modules: self, relationships, community, and society (See Table 1). Each session is designed to last for two hours and for this study, two sessions were held per week over a 10 week period.

TAU uses the AOP standard curriculum utilized by the department for women with violent offenses. Written for a male audience, the male pronouns have been crossed out and changed for incarcerated women at this prison. TAU is comprised of 44 sessions organized into four modules: orientation, case disclosures, offense precursors, and self-maintenance (See Table
2). Each session is also designed to last for two hours, and two sessions are usually conducted per week.

Both groups utilized a clinical professional as a facilitator, and while the facilitators were different, they had many years of experience as substance abuse and/or mental health treatment counselors within prisons. Sessions for both conditions followed a routine of meeting on the same days at the same time every week with one consistent facilitator. Sessions were cancelled only due to facilitator illness/unavailability or prison happenings prohibiting group (e.g. prison lock-down.) The groups were conducted from August 2011 until May 2012. Post-test surveys were conducted within two weeks of the last group session. The study concluded according to protocol after the post-test surveys were collected.

Measures

This study utilized measures for feasibility and to examine outcomes for mental health and anger factors. The feasibility of implementation was examined through feedback from facilitators and session-specific surveys by participants. In addition, the study used pre/post test surveys comprised of validated instruments measuring mental health (i.e., depression, anxiety, and PTSD) and anger (i.e., expression, experience, and type) to test change over time.

Feasibility. Similar to the pilot intervention (see Authors, 2013), feasibility in the general population units was assessed through regular meetings with prison administrators, routine contact with group facilitators, and collection of participant surveys for each session. Access to incarcerated individuals – and space within the prison – is highly controlled. As such, routine meetings with prison administrators assured the research staff access to participants and facilitators so that the research protocols could be adhered to within both groups. In addition to the pre/posttests, participant surveys were routine in each session, querying the following aspects:
participant ratings of the helpfulness of the session components (i.e., lecture, discussion, and activities), participation in and satisfaction with the session, and open-ended questions about the most and least favorite aspect of the session. Participants rated the helpfulness of sessions and session components (i.e., lecture, discussion) on a four-point scale, ranging from 0 to 3. These surveys were completed per session for women in each treatment condition. Group logs and participant surveys were used conjunctively to assess a participant’s length of stay in the intervention.

**Depression.** The Patient Health Questionnaire (PHQ): Depression Subscale (Kroenke, Spitzer & Williams, 2001) is a 9-item subscale that elicits depression symptoms experienced in the prior two week period. The PHQ has been used to measure depression and/or anxiety on various populations including those with offense histories, such as male offenders, incarcerated youths, and female inmates (Domalanta, Risser, Roberts, & Risser, 2003; Kubiak, Beeble, & Bybee, 2010; 2012; Thibodeau, Jorenby, Seal, Kim, & Sosman, 2010). Examples of items include “Experienced little interest or pleasure in doing things” and “Felt bad about yourself, or felt that you are a failure or have let yourself or your family down.” Respondents rated items on 4-point Likert scale ranging from “Not at all (0)” to “Nearly every day (3).” The nine responses were summed to measure the severity of depression symptoms. Internal consistency reliability coefficients for this scale at pretest and posttest were .78 and .76 respectively.

**Anxiety.** The Patient Health Questionnaire: Anxiety Subscale (Spitzer, Kroenke, & Williams, 1999) is comprised of 7 items that examine anxiety symptoms felt over the past four weeks. The first item, “Over the last four weeks, how often have you been feeling nervous, anxious, on edge, or worrying a lot about different things?”, was used as a screener to determine if participants had experienced anxiety symptoms over the prior four week period. Participants
then completed the remaining six items which included items such as “Getting tired very easily”, and “Feeling so restless that it’s hard to sit still.” Respondents rated items on a 4-point Likert scale ranging from “Not at all (0)” to “Nearly every day (3)”. The summed score of the 6 items was used. The alpha reliability coefficients for this scale were .67 at pretest and .71 at posttest.

**Post-Traumatic Stress Disorder (PTSD).** The Short Screening Scale for DSM-IV Posttraumatic Stress Disorder (modified version, Breslau, Peterson, Kessler, & Schultz, 1999) was an 8-item measure that collected current PTSD symptoms. This measure has been used for populations in correctional settings including arrested and detained youth and women (Abram, Teplin, Charles, Longworth, McClelland, & Dulcan, 2004; Kubiak, Beeble, & Bybee, 2010). The first item was used as screener to determine if participants have been exposed to a traumatic event, specifically, “In your life, have you ever had any experience that was considered frightening, horrible, or upsetting?” An affirmative response directed participants to complete the remaining seven items, which included items such as, “Avoided being reminded of this experience by staying away from certain places, people, or activities” and “Became jumpy or got easily startled by ordinary noises or movements.” Respondents rated responses on a 4-point Likert scale ranging from “Not at all (0)” to “Nearly every day (3)”. A summed score of the 8 items was used with a Cronbach’s alphas of .64 at pretest and .76 at posttest.

**Anger.** There were two measures of anger: Revised Expressions of Aggression Scale (Revised Expagg; Campbell, Muncer, McManus, & Woodhouse, 1999) and the State-Trait Expression Inventory – 2 (STAXI-2; Spielberger, 1999). The Revised Expagg was utilized to examine changes over time for the constructs of instrumental and expressive anger. As defined by Campbell and colleagues (1999), instrumental anger is a more outward expression of anger that is often used to control others. In contrast, expressive anger is characterized by holding in or
suppressing anger until there is an ‘explosion’ of emotion. The STAXI-2 was included to explore changes in the experience of, responses to, and the expression of anger, mainly through the constructs of state anger (i.e. anger as a temporary emotional state) and trait anger (i.e. intensity of anger as a constant component of the personality).

**Instrumental and expressive anger.** The Revised Expagg is comprised of 16-items with two subscales (instrumental and expressive) assessing anger expression. This scale has been used in many studies conducted in various countries for the measurement of anger expressions among male and female prisoners (Archer, & Graham-Kevan, 2003; Polaschek, Collie, Walkey, 2004; Smith & Waterman, 2006). The first subscale measures instrumental anger, or the use of anger to control others, and includes items such as, “I believe that physical force is needed to get through to some people”. The second subscale measures expressive anger, or demonstrations of anger, and includes items such as, “I am most likely to get physical when I’ve been under a lot of stress and some little thing pushes me over the edge”. Participants rated items on a 5-point Likert scale ranging from “Strongly disagree (1)” to “Strongly agree (5).” Responses were summed within the two subscales. Internal consistency reliability coefficients for instrumental anger scale were alpha = .82 at pretest and .87 at posttest. Cronbach’s alphas for expressive anger at pretest and posttest were .79 and .74 respectively.

**State and trait anger.** The STAXI-2 instrument is used to measure the experience and intensity of anger as an emotional state and as an emotional trait. This instrument has been widely used for the measurement of the experience and expression of anger among incarcerated men and women in studies conducted in many countries including the United States, Australia, and European countries (Dear, Thomson, Howells, & Hall, 2001; Fernández-Montalvo, Echeburúa, & Amor, 2005; Schützwohl & Maercker, 2000; Suter, Bryne, Bryne, Howells, &
Day, 2002). The 57-item STAXI-2 includes six scales, five subscales, and an Anger Expression Index. The State Anger scale assesses the intensity of angry feelings at a particular time. High State Anger scores translate to having experiences of relatively intense angry feelings. The State Anger scale consists of 15 items in three subscales, Feeling Angry, Feel like Expressing Anger Verbally, and Feel like Expressing Anger Physically. Participants rate the intensity of their emotions “right now” on a 4-point Likert scale ranging from “1 (Not at all)” to “4 (Very much so)”.

The Trait Anger scale measure how angry emotions are expressed over time. Persons with high Trait Anger scores frequently experience angry feelings and often feel that they are treated unfairly by others. The Trait Anger scale consists of 10 items in two subscales, Angry Temperament and Angry Reaction. Participants rate how they ‘generally’ feel on a 4-point Likert scale ranging from “1 (Almost never)” to “4 (Almost always)”.

The Anger Expression Index provides a general score of anger expression based on responses to four scales: Anger Expression-Out, Anger Expression-In, Anger Control-Out and Anger Control-In. Each sub-scale is comprised of 8 items. Scores are computed using the following formula: Anger Expression-Out + Anger Expression-In - (Anger Control-Out + Anger Control-In) + 48. Anger Expression-Out measures the expression of anger toward other persons or objects in the environment, with high scores indicating frequent expression of one’s anger in aggressive behavior. Anger Expression-In measures the angry feelings directed inward, and high scores correspond to having intense angry feelings, but with the tendency to suppress these feelings rather than expressing them either physically or verbally. Anger Control-Out is related to behaviorally preventing the expression of anger toward other persons or objects in the environment, and higher scores are typically favorable as they display a monitoring of angry
feelings and preventing of aggressive outward anger expression. Anger Control-In is related to the control of suppressed angry feelings by calming down or cooling off when angered. Persons with high Anger Control-In scores tend to calm down and reduce their anger quickly.

Participants rate how they generally react in certain situations on a 4-point Likert scale ranging from “1 (Almost never)” to “4 (Almost always)” for these four scales.

The STAXI-2’s scales and subscales were validated using multiple instruments, including the Buss-Durkee Hostility Inventory (Buss & Durkee, 1957), Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1967), State-Trait Personality Inventory (Spielberger, 1979), and the Eysenck Personality Questionnaire (Spielberger, 1999). In the American sample of 1,900 subjects, the subscales showed decent internal consistency, varying from .82 to .75 (Spielberger, 1999). The test-retest reliability of this instrument has shown to be stable over time (Bishop & Quah, 1998; Jacobs, Latham, & Brown, 1988). In this study, Cronbach’s alphas for State Anger at pretest and posttest were .94 and .96 respectively. Cronbach’s alphas for Trait Anger at pretest and posttest were .89 and .89 respectively. Cronbach’s alphas for Anger Expression-Out, Anger Expression-In, Anger Control-Out, and Anger Control-In were .79, .64, .89, .90 in pretest and .74 and .74, .85, .90 in post test respectively. Internal consistency reliability coefficients for Anger Expression Index were .72 at pretest and .79 at posttest.

Analysis

Paired-samples t-tests were conducted to examine differences in feasibility-related factors, including satisfaction and dosage, and for depression, anxiety, PTSD, and forms of anger within each group. Repeated measures ANOVA were conducted to explore sub-group differences over time between women who received BV treatment and those who had TAU treatment.

Results
All of the 22 women who participated in the study had committed their crime, on average, at 31 years old (SD=9.56) and the mean age at the time of the intervention was 34 years old (SD=9.12). The average length of stay in prison at the time of participation was 4 years (SD=3.99). The majority of women (n=14, 64%) were African American and 32% of the women were White (n=7). Table 3 describes the sample demographics of the women in the study, as well as differences between women who participated in the BV treatment and those who received the TAU intervention. There were no significant demographic differences between participants in the BV and TAU conditions.

Feasibility of Implementation

Rate of completion. Of the 22 women who completed a pre-test, a total of 19 women (86.4%) completed their assigned intervention. Three women (14%) did not complete their assigned treatment group (2 women in TAU and 1 in BV) due to termination or voluntary removal. Significant differences were found between women who completed and those who did not complete in regards to age at offense and race. Women who did not complete were more likely to commit their offense at a younger age (M=25, SD=0.58), compared to those who completed treatment (M=31, SD=10.05, t= 2.70, p=.014). The majority of women who completed treatment were African American (n=14, 73.7%), while those who did not complete were white (n=2, 66.7%) or other race (n=1, 33.3%, χ²= 9.87, p=.007).

Dosage. To determine whether individuals received an adequate ‘dose’ of the intervention, we assessed the proportion of women receiving at least 75% of the content, as evidenced by group sign in sheets and individual feedback forms from those attending each session. Among the 22 women who participated in this study and completed a pre-test, 20 women received more than 75% of assigned intervention. All women who completed treatment
(n=19) participated in 75% or more of the sessions in both BV and TAU groups. Among the 19 women completing their assigned intervention, women in BV attended 94% of the 20 sessions (range= 16-20 and mean=18.8) and women in TAU attended 99% of the 44 sessions (range= 42-44 and mean= 43.5).

**Helpfulness, participation, and satisfaction.** At the end of each session, participants completed a survey which consisted of questions about the helpfulness of components of the session, their participation level, and their satisfaction with the session. The questionnaire ratings on helpfulness ranged from 0 (not helpful) to 3 (very helpful). The 20 participants who received more than 75% of assigned intervention in both groups reported that components of the intervention were helpful including the lectures (M=2.91, SD=0.14), discussions (M=2.91, SD=0.13), and activities (M=2.85, SD=0.20). However, there were significant differences between groups. Women who participated in BV reported significantly higher ratings of helpfulness on every aspect of treatment including lecture (M= 2.96 vs. 2.84, t(18)=2.11, p=.049), discussion (M=2.96 vs. 2.85, t(18)=2.23, p=.039), and activities (M=2.95 vs. 2.71, t(18)=3.19, p=.005).

Participants were also asked to self-rate their level of participation per session with a scale from 0 (none) to 3 (high). Women in both groups actively participated in each session by cooperating (M=2.90, SD=0.19), giving feedback (M=2.84, SD=0.26) and accepting feedback (M=2.89, SD=0.20) to/from other members and counselor, and supporting group members (M=2.83, SD=0.29). There were no significant differences found between women’s rating of participation in the BV and TAU groups. For each session, participants were asked whether they felt their needs were met and whether they felt they had benefited from the session. In both groups, participants reported that their needs were met and that the session was beneficial overall.
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for over 90% of the sessions they attended. However, women in the BV group reported a
significantly higher proportion of sessions as meeting their needs (99% vs. 91%, t=3.92, p=.003),
as well as a significantly higher proportion of sessions as beneficial (100% vs. 89%, t=5.23,
\( p=.001 \)).

**Effectiveness of Interventions**

Examination of pre and post test score differences for all of the 19 women who completed treatment and the post test displays significant differences in the averages on all of the mental health measures. Table 4 describes the average changes in the pre- and post-test measures of mental health and anger among all of the women who completed either intervention condition. There were significant changes in depression, anxiety and PTSD symptoms with moderate to large effect sizes across all women. Symptoms associated with all tested mental health disorders decreased significantly over time across interventions: depression (6.4 versus 3.7), anxiety (5.3 versus 3.4), and PTSD (6.0 versus 3.4). As Table 4 illustrates, the largest effect size was related to the change in PTSD symptoms (\( d = 1.30 \)). No harms or unintended effects to the women were found throughout the study.

Two measures of women’s anger expression were explored: instrumental /expressive anger and state / trait anger. Significant changes were seen across a majority of the measurements of anger across both interventions. Instrumental anger decreased significantly (17.8 to 12.9) with a large effect size (\( d = 1.02 \)). Expressive anger, on the other hand, remained constant (24.4 to 24.6), and was the only major anger scale to not experience significant change.

The other measures of women’s anger were specifically focused on state and trait anger and displayed mainly consistent and desired changes. The STAXI State Anger total score decreased after intervention (23.1 to 17.7) with a large effect size (\( d = 1.00 \)). In conjunction, the
state anger sub-scales of both the experience of anger (i.e. Feeling Angry) and the resulting expressions of anger (i.e. Expressing Verbally, and Expressing Physically) showed significant decreases over time. Similar to the results found for state anger, the findings for trait anger showed significant changes related to various dimensions of women’s anger. The STAXI Trait Anger total score also significantly decreased after intervention, from 17.8 to 13.7, with a large effect size ($d= 1.05$). The sub-scales associated with trait anger in regards to perceptions related to anger (i.e. Temperament) and outward expressions of anger (i.e. Reaction) also significantly decreased post-intervention.

As a measure of both anger expression and anger control, the STAXI Anger Expression Index decreased from 40.8 to 30.0 with a large effect size ($d=1.05$), and there were differences in score changes within the subscales which constitute the Anger Expression Index. Most importantly, the anger control measures (Control-Out and Control-In) significantly increased as desired, with large effect sizes overall ($d= -0.96$ for Control- Out and -1.22 for Control-In).

**Differences in Treatment Outcomes across Interventions**

Further analyses examined specific differences between the mental health and anger related outcomes for women in each treatment group. Table 5 shows the results of the repeated measure ANOVA testing differences in treatment effects between the BV and TAU interventions. In terms of mental health indicators, a significant difference was found for the measure of anxiety, with symptom levels decreasing from 5.3 to 2.2 for women in BV compared to a reduction from 5.3 to 5.0 ($F=5.32$) for women in TAU.

While no significant differences were present for instrumental or expressive anger, there were significant findings for state anger. Intervention effects significantly differed between the two groups on the STAXI State Anger Scale: scores for women in BV declined from 22.6 to 15.8
compared to a decrease from 23.9 to 20.4 for women in the TAU group ($F=8.84$). Consistent with the significant change on the State Anger Scale, two of the embedded subscales (i.e. Feeling Angry and Expressing Verbally) also demonstrated an intervention effect that was positive for BV (See Table 5).

**Discussion and Applications to Social Work**

The purpose of this study was to assess and compare the feasibility and outcomes (mental health and anger) of two violence prevention interventions in a general population setting within a women’s prison. This comparison was intentionally designed to further test a new intervention, BV, using steps of an intervention research paradigm (Fraser et al., 2009). Specifically, this study focuses on testing the feasibility and efficacy of the intervention in a new setting (i.e., general population versus specialized treatment unit) and is especially relevant in determining ecological validity as this is where the intervention will likely be offered in other prison settings. In this study, BV was delivered in a general population prison setting and compared to the existing, previously untested, treatment as usual intervention for women with violent offenses. While significant changes were found over time for women participating in both interventions, women in BV reported higher satisfaction and better mental health outcome. Participant ratings on feasibility measures of helpfulness, perceived benefit, and satisfaction, as well as improvements in the specific areas of anxiety and state anger expression were significantly higher for women in the experimental condition (BV) as compared to women in the TAU group. Given that such interventions are often required for incarcerated women with violent offenses to meet their prison treatment goals and thus parole eligibility (Hannah-Moffat & Yule, 2011), this research is essential in building the evidence-base about what works with an often neglected but important population.
Notably, BV is more efficient in producing short-term outcomes than TAU in terms of costs and resources. The BV curriculum is comprised of just 20 sessions administered at a rate of two sessions per week over the course of ten weeks. Comparatively, the TAU curriculum is comprised of 44 sessions administered at a rate of two sessions per week over the course of 22 weeks. Accommodating holidays and routine time off taken by the group facilitators over the course of treatment, the average actual program length for TAU is nearly three times longer than BV. The savings in costs and resources attributable to the more efficient delivery of the BV curriculum (78 days versus 209 days) renders BV superior to AOP in the delivery of these short-term outcomes.

Previous research on BV found that women reported high levels of satisfaction and achieved positive outcomes with the intervention when it was delivered within a therapeutic unit of a women’s prison, a highly specialized and segregated unit within the prison that resembles a residential treatment modality in the community (Authors, 2013). In this current study, the intervention was delivered within the general population setting of the prison, which is similar to outpatient treatment in the community setting in that it lacks a ‘residential,’ intentional therapeutic environment component and is embedded in the day-to-day activities in the prison. This distinction is often lost on those not familiar with prison settings as all treatment is assumed to be ‘residential’ since all occupants live within the confines of the institution. However, therapeutic communities (TC) within prisons are more highly structured and generally isolated from the greater prison environment. The TC is considered highly effective and is a recommended form of mental health practice for incarcerated adults (U.S. Department of Health and Human Services, 2005). On the other hand, the general population setting in prison is considered a less than desirable environment given that aspects specific to prison (e.g. the
Testing a Violence Intervention
depersonalization of the experience and the pervasive role of inmate culture) exacerbate feelings of depression, lack of privacy, and an overall non-therapeutic environment (U.S. Department of Health and Human Services, 2005). Examining the feasibility of delivery within in the general population setting is essential as it is a challenging environment for therapeutic intervention but also is the most likely setting to be the utilized in future implementations in prisons.

While women in both groups had high rates of participation and reported positive feedback on satisfaction, helpfulness, and perceived benefits, women in BV had significantly higher ratings which may be connected to the gender-responsiveness dynamic of the intervention’s content. The AOP curriculum used in the TAU groups was designed by the prison’s psychological services unit for males. References utilized in the development include writings such as ‘Violent men: An inquiry into the psychology of violence’ (Toch, 1992) and ‘Men’s work’ (Kivel, 1992). While the AOP curriculum, similar to BV, focuses on anger and uses a cognitive-behavioral clinical orientation, the trauma-theory underlying the development of the BV intervention may have resonated more deeply with the experiences of women in BV as evidenced by their elevated pre-test scores on measures of PTSD symptoms. However, one limitation of the study is that we cannot account for the effects of the facilitator on the perceptions of the intervention and therefore cannot differentiate whether this finding is attributable to the curriculum in general or the skills associated with the group facilitator. Although the facilitators were well trained and seasoned in working within the prison environment, the inability to assess the facilitator effects on the outcomes is limitation of the study. Subsequent – and larger studies – can possibly create a nested design that will allow for the collection of information on the interaction between group and facilitator. In the previous feasibility and pilot studies done using the BV curriculum, three different facilitators were
utilized, all with the same training on BV and orientation to work within the prison. In each of these three groups there were positive differences in comparing the pre and post test results. Nonetheless, these findings indicate that despite the lack of an intentional therapeutic environment within the general population setting, women are able to engage with and benefit from BV, reporting consistently high ratings on measures of feasibility.

For participants in both treatment groups, symptoms related to mental health disorders (i.e. depression, anxiety, and PTSD) decreased significantly by the end of the intervention, with the largest effect attributable to PTSD symptoms. These significant changes indicate that incarcerated women respond to and benefit from these violence reduction interventions as evidenced by changes in mental health symptoms. In addition, women in the experimental condition, BV had significantly lower anxiety scores at the post-test than women in the TAU group which may be a promising feature of BV given that anxiety and depression are correlates to severe violence perpetration (Magdol et al, 1997). Therefore, these results indicate that BV can be used to address a variety of the mental health needs experienced by incarcerated women. Likewise, since mental health disorders have been linked with use of violence (Chemtob et al., 1997; Logan & Blackburn, 2009; Silver et al., 2008; Skeem et al., 2005), this intervention has utility as a violence prevention intervention.

Positive changes were found for women in both groups in regards to multiple forms of anger expression, and each form offers a nuanced insight into women’s experiences and behaviors related to anger. Notably, instrumental anger scores decreased significantly for women in both groups. Instrumental anger is a common form of anger expression associated with aggressive behaviors (Campbell & Muncer, 1987), especially for women involved in violence against intimate partners (Babcock, Miller, & Siard, 2003). Therefore, both interventions appear
to be targeting and decreasing a form of women’s anger expression that is linked to violent behaviors.

Likewise, positive significant changes were present in decreases in state and trait anger for both groups of women. Most amenable to change is state anger as it is considered more ‘situational’ as compared to trait anger which is typically associated with an individual’s personality and expression of anger over time (e.g. level of impulsivity and temperament). High state anger scores commonly are driven by the intensity of the angry feelings (Spielberger, 1999) and women demonstrated significant decreases in the measure of state anger, including the subscales, indicating declines in the feelings and intensity of anger, as well as decreasing their use of physical and verbally aggressive behaviors associated with their feelings of anger. Women in the BV group showed significant decreases in these state anger scores, in comparison to women in the TAU group. These results indicate that BV is successfully targeting multiple forms of women’s anger: their feelings of intensity of the emotion and their behaviors related to angry feelings. As the goals of BV specify reducing violent and aggressive actions within and outside of prison, these outcomes show promise and alignment with the intended goals. While future research will examine long-term outcomes to test how this intervention influences recidivism and criminal-justice involvement related outcomes, this study shows changes on measures connected to specific aspects of anger associated with acts of aggression.

Beyond Violence’s significant effects on anxiety and forms of anger expression may indicate an especially important finding. Research on women with violent offenses, specifically related to domestic violence, has suggested that poor attachment in relationships, coupled with higher levels of anxiety, more intense feelings of anger, and poor anger management skills, may lead to the women’s aggressive acts (Goldenson, Geffner, Foster, & Clipson, 2007). Other
samples of incarcerated women have connected elevated levels of PTSD symptoms with correlating behaviors and symptoms of trauma, such as elevated anxiety and anger levels, with acts of aggression (Abel, 2001; Babcock et al., 2003; Henning et al., 2003). Therefore, BV appears to be more positively influencing factors that play an interconnected role in aggression for women.

Anger expression, either as highly suppressed or highly expressed, has shown a relationship with women’s depression and PTSD (Sperberg & Stabb, 1998), and women’s lack of healthy anger expression has been linked to cycles of unresolved anger leading to further suppression or extreme outbursts (Cox et al., 2004; Thomas, Smucker, & Dropleman, 1998). Under-controlled/ over-expressed anger expression has also been linked with women’s aggressive behavior specifically with intimate partners (Swan, Gambone, Fields, Sullivan, & Snow, 2005). Anger expression also shows a mediating relationship between childhood abuse histories and adult women’s perpetration of intimate partner violence (Maneta, Cohen, Schulz, & Waldinger, 2012). Thus, given that BV is both a gender-specific and trauma-informed intervention that incorporates an explicit focus on anger, it shows promise based on theoretical and empirical evidence from prior research as well as with these current results.

The study of women’s anger is an issue that the research team has grappled with, as, in addition to the area of interventions for women’s violence reduction, women’s anger is highly under-studied. Previous steps in the intervention research process included utilizing a different measure for women’s anger expression (i.e. Buss Warren, 2004) which yielded little noticeable changes quantitatively and seemed unable to capture the changes women were expressing qualitatively in the study process (see Authors 2012; Authors 2013). The STAXI as utilized in this phase of the study appears to capture more accurately and comprehensively nuances in
women’s anger expression. Future research can further refine measurements of women’s anger, as well as understandings of the multi-components of women’s anger as it relates and connects to their aggressive behaviors.

This study has several limitations in addition to the aforementioned inability to test the effect of facilitator. First, of main concern, a small sample was utilized for this study, leading to the need for future replication with larger samples in a range of women’s prisons. Second, as previous studies have illuminated the difficulties of maintaining an intended methodology within prison (Byrne, 2006), this study experienced similar difficulty in attempting to perform a randomized control trial within the prison setting. While a strong, well established relationship was in place with the prison administration, this research team encountered numerous problematic steps in the randomization process, namely issues of timing, difficult logistics for communication between all levels of staff and the research team, and issues of the waitlist with parole needs of the women. Selection bias is a potential concern given the administrative difficulty we faced in the participant selection process. However, given that the women selected for the interventions had no significant differences and still met the study’s criteria, our study does not fully meet this bias criteria. Another potential form of bias is transfer bias (Pannucci & Wilkins, 2011) given that two women were lost to follow-up in TAU in comparison to only one woman in BV. This could be an artifact of the length of time of TAU of 44 sessions to only 20 sessions for BV. Therefore, the greater loss of participants for TAU could be due to the longer length of time for completion of the sessions. Future replication studies can further explore the role of timing and bias. Finally, the findings are specific to the population of this study, women who were convicted of violent offenses and were diagnosed to have substance abuse dependency
by the Substance Abuse Subtle Screening Inventory. Therefore, it may not be generalizable to other populations.

**Conclusion**

Overall, in following with the steps of intervention research (Fraser et al., 2009), consistent, positive, and significant short-term outcomes have been found for Beyond Violence. At this point, BV has shown indicators of successful implementation and effectiveness with a range of women with violent offenses (e.g. based on sentence length, age, and similar factors) within a therapeutic unit (Authors, 2012; Authors, 2013) and in the general population of a women’s prison. Likewise, given budgetary considerations by prison administration for effective and time efficient interventions, Beyond Violence was able to deliver such an intervention within half the time of the existing treatment group. Beyond Violence is the first violence reduction intervention that is evidence-based for women with violent offenses, which highlights a larger issue for social work practice: the need to continue to expand the knowledge base, intervention provision, and advocacy for incarcerated women.
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Table 1

Beyond Violence Manual Components

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<th>Opening Session</th>
<th>Session 1: Thinking Our Thoughts</th>
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<tbody>
<tr>
<td>Module A: Self</td>
<td>Session 2: Feeling Our Feelings</td>
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<tr>
<td></td>
<td>Session 3: Violence and Trauma in Our Lives</td>
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<tr>
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<td>Session 4: The Effects of Trauma</td>
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<td>Session 5: Women and Anger</td>
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<td>Session 6: Understanding Ourselves</td>
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<th>Session 7: Our Families</th>
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<td>Session 9: Power and Control</td>
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<td></td>
<td>Session 10: Conflict Resolution</td>
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<td>Session 11: Creating Our Relationships</td>
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Module C: Community

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<tr>
<td>Session 14:</td>
<td>Creating Community</td>
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<tr>
<td>Session 15:</td>
<td>The Power of Community</td>
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Module D: Society

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<th>Society and Violence</th>
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<td>Session 17:</td>
<td>Creating Change</td>
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<tr>
<td>Session 18:</td>
<td>Transforming Our Lives</td>
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<tr>
<td>Session 19:</td>
<td>Honoring Ourselves and Our Community</td>
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Table 2

Assaultive Offender Program (AOP) Curriculum

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<tr>
<td>Part I: Program Orientation</td>
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<td>Module 1: Treatment Expectations</td>
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<tr>
<td>Module 2: Understanding the Problem</td>
</tr>
<tr>
<td>Part II: Case Disclosures</td>
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<td>Module 3: Offense Foundations</td>
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<tr>
<td>Module 4: Assault Descriptions</td>
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<tr>
<td>Part III: Offense Precursors</td>
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<td>Module 5: Behaviors</td>
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<td>Module 6: Thoughts</td>
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<tr>
<td>Module 7: Emotions</td>
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<tr>
<td>Part IV: Self Maintenance</td>
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<tr>
<td>Module 8: The Relapse Process</td>
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<tr>
<td>Module 9: Environmental Controls</td>
</tr>
<tr>
<td>Module 10: Internal Interventions</td>
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</table>
### Module 12: R-P Plan Review

Sessions: 40 – 44

---

**Table 3**

*Differences between women in BV and AOP*

<table>
<thead>
<tr>
<th></th>
<th>Total (N=22)</th>
<th>Women in BV (n=12, %)</th>
<th>Women in AOP (n=10, %)</th>
<th>( t ) (20)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
<td>Age at offense</td>
<td>30.09</td>
<td>9.56</td>
<td>31.58</td>
<td>10.36</td>
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<td>Age at treatment</td>
<td>34.18</td>
<td>9.12</td>
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<tr>
<td>Length of stay at prison</td>
<td>4.09</td>
<td>3.99</td>
<td>5.17</td>
<td>5.10</td>
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<tr>
<td>Race</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Black</td>
<td>14</td>
<td>63.6</td>
<td>9</td>
<td>75.0</td>
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Testing a Violence Intervention

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<th>Post test</th>
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<th>d</th>
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<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
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<td>White</td>
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<td>31.8</td>
<td>3</td>
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<td>Other</td>
<td>1</td>
<td>4.6</td>
<td>0</td>
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* $p < .05$  ** $p < .01$

Table 4

*Change on outcome measures test between pre-post intervention (n=19)*
<table>
<thead>
<tr>
<th></th>
<th>AOP (N= 8)</th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
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<tr>
<td></td>
<td>Pre test</td>
<td>Post test</td>
<td>Pre test</td>
<td>Post test</td>
<td>F(1, 16)</td>
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<tr>
<td>STAXI Trait Anger Total</td>
<td>17.79</td>
<td>7.42</td>
<td>13.74</td>
<td>4.82</td>
<td>2.98**</td>
</tr>
<tr>
<td>Temperament</td>
<td>7.05</td>
<td>3.44</td>
<td>4.95</td>
<td>1.47</td>
<td>2.94**</td>
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<tr>
<td>Reaction</td>
<td>7.00</td>
<td>2.96</td>
<td>5.47</td>
<td>2.48</td>
<td>2.31*</td>
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</table>

* *p < .05, **p < .01, ***p < .001

Table 5

Group differences in change on outcome measures between AOP and BV over time (n=19)
<table>
<thead>
<tr>
<th></th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>Mean 3</th>
<th>Mean 4</th>
<th>Mean 5</th>
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</thead>
<tbody>
<tr>
<td>Expressing Verbally</td>
<td>8.75</td>
<td>7.25</td>
<td>8.09</td>
<td>5.36</td>
<td>6.05*</td>
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<tr>
<td>Expressing Physically</td>
<td>6.38</td>
<td>5.38</td>
<td>6.82</td>
<td>5.00</td>
<td>1.84</td>
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<tr>
<td>STAXI Trait Anger Total</td>
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<td>13.63</td>
<td>17.73</td>
<td>13.82</td>
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<td>Temperament</td>
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<td>4.88</td>
<td>6.55</td>
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<tr>
<td>Reaction</td>
<td>6.50</td>
<td>5.50</td>
<td>7.36</td>
<td>5.45</td>
<td>0.12</td>
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</table>

* $p<.05$, ** $p<.01$
Figure 1: Flow of participants through each stage

Assessed for eligibility (n=28)

Excluded (total n=6)
- Did not meet inclusion criteria (n=2)
- Dept. data lags – already enrolled in groups (n=4)

Randomized (n=22)

Allocated to intervention (n=12)
- Received allocated intervention (n=12)

Allocation

Allocated to intervention (n=10)
- Received allocated intervention (n=10)

Follow-Up

Lost to follow-up (n=1)
- Discontinued allocated intervention (n=1)

Analysis

Lost to follow-up (n=2)
- Discontinued allocated intervention (n=2)
- Involuntary- sent to segregation (n=1)
- Voluntary left group (n=1)

Analyzed (n=11)
- Excluded from analysis (n=0)

Analyzed (n=8)
- Excluded from analysis (n=0)