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Racial Differences in Treatment Effect among Men in a Substance Abuse and Domestic Violence Program

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Abstract

Background—It is unclear whether racial differences in treatment effect exist for individuals in substance abuse and domestic violence programs.

Objectives—This study examined racial differences in treatment effect among substance dependent Caucasian and African-American male intimate partner violence (IPV) offenders court mandated to an integrated substance abuse and domestic violence treatment.

Methods—From baseline to completion of treatment (week 12), 75 participants (39 Caucasian; 36 African-American) were assessed on demographics, substance use, legal characteristics, and use of violence (physical, verbal, and psychological).

Results—African-American men served more months incarcerated in their life than Caucasian men. Both groups showed decreases in their use of physical violence and alcohol abuse over treatment. Caucasian men also showed a decrease in their use of verbal abuse.

Conclusions and Scientific Significance—At treatment completion, both groups showed a reduction in physical abuse and alcohol abuse. Caucasian men showed a reduction in their use of verbal abuse, but African-American men did not. Substance dependent African-American male IPV offenders may benefit from interventions that thoroughly target communication skills in addition to issues of substance abuse and IPV to reduce use of verbal abuse and improve treatment outcomes among African American men.

Keywords

domestic violence; intimate partner violence; racial differences; substance abuse

INTRODUCTION

Intimate partner violence (IPV) is a major public health concern with 1 in 5 couples in the United States experiencing at least one incidence of IPV during the past 12 months (1). One-fourth to one-half of people who commit acts of IPV also have substance abuse problems (2, 3). In fact, research suggests that in substance dependent men, the incidence of IPV is highest on days of substance abuse than days of substance use (4). Other studies suggest a link between minority status and IPV (5).

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

To date, there are few systematic evaluations of well-defined treatments for substance dependent men with co-occurring IPV. Treatment options among this population often become complicated because substance abuse, mental health, and court agencies often try to decipher “when and how” to treat (a) the male who has problems with substance abuse and IPV, (b) the female victims of IPV, or (c) both partners in the dyad (e.g., the couple) as well as whether to target aggression or substance use first. Men with both substance abuse and IPV problems are typically under legal pressure to receive treatment and are often stipulated to separate treatment facilities (e.g., substance abuse or anger management), such as a court appointed “batterers” group and a substance abuse treatment facility. Thus, rarely are both problems addressed, nor is there coordination or communication between substance abuse and IPV agencies (6). Men with co-occurring substance use and IPV often fail to attend a single treatment program, much less two separate programs with different schedules and treatment philosophies. Furthermore, recent reviews suggest that referrals to separate programs are not effective (6, 7).

An initial randomized clinical trial (8) evaluated the efficacy of an integrated substance abuse domestic violence (SADV) group therapy versus a Twelve-Step Facilitation (TSF) group for alcohol dependent men with histories of IPV. Major findings were as follows: First, there was a significant difference between participants in the SADV group versus the TSF group on alcohol use outcomes. Individuals in the SADV group had significantly more percent days abstinent from alcohol use during the 12 weeks of treatment compared to individuals in the TSF condition. Second, there was a trend for participants in the SADV condition to have greater reductions in the frequency of physical violence from pre- to post-treatment as compared to participants in the TSF group. However, there was no significant difference between individuals in the SADV group versus participants in the TSF group across percent days abstinent from alcohol use or frequency of physical violence at the 6-month follow-up.

Although the main findings noted differences between groups across substance use and aggression, the initial randomized study did not assess differences between minority and non-minority populations in the SADV condition regarding baseline characteristics or treatment outcomes. This question remains unanswered, and there appears to be a discrepancy in the literature regarding whether there are differences between minority and non-minority clients in baseline characteristics, substance use and IPV treatment outcomes (5, 9, 10). For example, surveys of IPV within community samples have shown higher rates of IPV among African-Americans compared to Caucasians. Specifically, in 1980, the National Family Violence Survey (NFVS) found that African-Americans were twice as likely to engage in IPV as were Caucasians (11). Yet, early estimates of IPV are thought not to be accurate because they did not control for confounding variables, such as socioeconomic status. Today, with such improvements in research methodology and respondent’s willingness to disclose information, it is likely that the disparity between groups has lessened. That is, the differences in rates of violence have decreased from twice as likely to engage in violence to equivalent levels of violence (9, 10).

Current research questions whether the differences in substance abuse and IPV treatment outcomes are related to minority status or whether socioeconomic status is a key variable in determining substance abuse and IPV outcomes among racial groups. For example, Tjaden and Thoennes (12) found that racial differences in rates of IPV nearly disappear when socioeconomic variables are controlled. It suffices to say that high rates of poverty, financial problems, and unemployment influence rates of IPV for African-Americans (13, 14).

Little is known about racial differences among substance dependent IPV offenders. The available treatment studies have exclusively focused on racial differences among either

substance users or IPV offenders (15-18). This secondary analysis of data from a randomized study of treatment efficacy was conducted to investigate differential effectiveness of the SADV treatment among court-mandated Caucasian and African-American male IPV offenders. First, we examined baseline demographics to identify racial differences across socioeconomic characteristics. Then, we examined changes in scores indicating the use of violence (use of physical violence, verbal abuse, and psychological abuse), alcohol, and drugs from baseline to completion of treatment over the 12-week SADV intervention. We examined the following research questions: 1) Are there differences in pretreatment demographics, substances use, IPV, and legal characteristics between Caucasian and African-American male IPV offenders? 2) Are there differences in treatment outcomes from pretreatment to treatment completion between Caucasian and African-American male IPV offenders? For example, are there differences between Caucasian and African-American men in physical violence (shoving, slapping, pushing, kicking), verbal abuse (swearing at partner, calling partner names, yelling, screaming), and psychological abuse (threats to harm, withholding money, withholding household resources) as well as differences in alcohol and drug use at treatment completion.

METHODS

All participants were court-mandated to substance abuse and domestic violence treatment after an arrest for a domestic-related incident in which the individual was under the influence. Recruitment was conducted through the Alcohol and Substance Abuse Programs (ASAP), an outpatient substance abuse treatment facility of Yale University's School of Medicine, Department of Psychiatry. Participants who signed informed consent to partake in the study were male, ages 18 or older, who met Diagnostic and Statistical Manual of Mental Disorders-IV-TR (DSM-IV) criteria for alcohol dependence, and were arrested for IPV within the past year. Exclusion criteria included psychotic or manic symptoms within the past month, suicidal or homicidal ideation, need for alcohol detoxification, current involvement in substance abuse or IPV treatment within the last 60 days, and an inability to read at a fifth-grade level. Written informed consent was approved by the Yale University Institutional Review Board and was obtained at the first evaluation appointment prior to their first research assessment session.

The SADV treatment is a manualized, evidence-based, cognitive behavioral intervention that was delivered by Master's level therapists (or higher) in weekly 60-minute group therapy sessions over the course of 12-weeks. SADV was shown to have treatment fidelity as measured by the Yale Adherence and Competence Scale (YACS) (19); for further details see Easton et al. (8).

Participants

Table 1 shows overall demographic characteristics and differences in demographics between groups. Age ranged from 21 to 60, with a mean of 39 years ($SD = 21$). Seventy-one percent of the sample had a high school degree or GED and 62% were employed full-time. Thirty-five percent of the participants had never been married, 38% were married, and 27% were divorced or separated. For the present analysis, the sample was restricted to Caucasian and African-American male participants in the SADV condition for a total sample size of 75 (39 Caucasian, 36 African-American).

Measures

Data on assessments administered at baseline and treatment completion (week 12) were utilized. The Structured Clinical Interview for DSM-IV (SCID-IV) (20) was used to assess current and lifetime psychiatric diagnoses. The Addiction Severity Index (ASI) (21) was

used to ascertain substance use and psychosocial functioning including socioeconomic information. The Timeline Follow Back calendar (TLFB) (22) was used to assess participants' self-report of daily alcohol and [ISP-1] or drug use. Breathalyzer and urinalysis screens were also used as an objective measure of current substance use. The Revised Conflict Tactics Scale (CTS2) (23) was used to assess incidents of physical and psychological violence toward a significant other. Although the entire CTS2 was administered, the sexual coercion subscale was not included in analyses due to low base rates of participants reporting it (e.g., under 5% reported coercing [ISP-1] forcing sex).

Data Analyses

For continuous variables, independent samples *t*-tests were used to analyze group differences between substance dependent Caucasian and African-American IPV offenders across demographics, substance abuse severity, IPV, and legal characteristics. Chi square tests were conducted for categorical measures. For all inferential tests, significance was assumed at $p < .05$.

Changes in scores from the CTS2 (for use of physical violence, verbal abuse, and psychological abuse) and the ASI (for alcohol and drug composite scores) were analyzed using repeated measures linear mixed models to investigate whether the SADV treatment had different effects on Caucasian IPV offenders versus African American IPV offenders. For comparison of the two groups, the analysis modeled changes in CTS2 and ASI scores from baseline to treatment completion as a function of race and time. The model included main effects for time, race, and group as well as interactions between time and race. Due to the exploratory nature of this secondary analysis, the 3 scales of the CTS-2 were evaluated as separate outcome measures. According to Akaike's Information Criterion and Schwarz's Bayesian Criterion, a first-order autoregressive covariance structure appeared to be the best fitting variance-covariance matrix. Bonferroni adjustments were used for follow-up simple effects of significant interactions.

RESULTS

Demographics

Table 1 shows differences between groups in demographics. Baseline differences between groups showed that the African-American IPV offenders spent significantly more months incarcerated in their lifetime ($M = 9.5$, $SD 19.5$) than Caucasian IPV offenders (see Table 1). The eta-squared statistic (.77) indicated a large effect size. There were no other significant baseline differences between groups in demographic characteristics, substance abuse severity, incidence of IPV, or legal characteristics.

Violence Measures

Linear mixed models for the average use of physical violence (e.g., hitting, punching, slapping) showed no significant main effect for group or group by time interaction, but there was a significant decrease in reported physical violence over treatment, [$F(1, 75) = 27.40$, $p < .001$]. For the average use of verbal abuse (e.g., shouting, threatening partner), linear mixed models showed no significant main effects for group, but a significant decrease in reported verbal abuse over treatment, [$F(1, 75) = 26.96$, $p < .001$], and a significant group by time interaction [$F(1, 75) = 8.11$, $p = .008$]. Bonferroni corrected simple effects indicated that verbal abuse decreased significantly over treatment for Caucasian IPV offenders [$F(1, 75) = 13.12$, $p = .001$], but not for African-American IPV offenders [$F(1, 75) = 1.65$, $p = .20$]. [ISP-1]. Finally, for the combined groups there was no decrease from baseline to treatment completion in the average use of psychological abuse (e.g., destroying property: all p 's $> .05$).

Substance Abuse

For alcohol use there was no significant group or interaction effect, but there was a significant decrease in reported alcohol use over treatment [$F(1, 75) = 13.71, p = .001$]. No significant effects were noted for drug use (all p 's $> .05$).

DISCUSSION

In the present study we examined racial differences in treatment effect between substance dependent Caucasian and African-American male IPV offenders in a SADV treatment. The results of this study show that Caucasian and African-American IPV offenders differ in baseline legal characteristics. Specifically, African-American IPV offenders spent more time incarcerated in their lifetime than Caucasian IPV offenders. The results also showed differences in treatment outcomes between groups. Although both groups showed a decrease in reported use of physical violence and alcohol over treatment, Caucasian IPV offenders showed a decrease in reported verbal abuse while African-American IPV offenders did not. Neither group showed a significant decrease in their use of psychological abuse or use of drugs from baseline to treatment completion.

The finding that African-American IPV offenders had spent more time incarcerated in their lifetime is consistent with current estimates showing that African-American men have over six times the imprisonment rate of Caucasian men (24). However, without data on previous arrest histories, it is difficult to objectively determine the magnitude of the difference. Partial explanations for racial disparities in incarceration include unbalanced sentencing policies (25) and the fact that cities have more poor people, minorities, and higher rates of crime than suburban areas resulting in the overrepresentation of urban minorities in the criminal justice system (26). Surprisingly, no other baseline socioeconomic or demographic differences were found between groups.

Decreases in reported use of physical violence and alcohol are likely related to the participants' involvement in treatment. These findings are similar to results from the SADV randomized clinical trial (8) that found that the SADV treatment had positive effects in decreasing alcohol use and physical violence among alcohol dependent IPV offenders. The non-significant effect for psychological abuse could be related to low base rates of this particular behavior in the sample. Furthermore, the non-significant finding for reductions in drug use may be because the original SADV treatment was developed to specifically target alcohol use among alcohol dependent IPV offenders.

In contrast to our findings is a study by Buttell and Pike (17) that investigated the effectiveness of a 12-week court mandated batterer intervention group. The authors measured violence, lethality, control, alcohol use, drug use, and stress-coping abilities as outcome variables. Results showed that the intervention was equally effective for Caucasian and African-American IPV offenders. However, the batterer treatment was designed to only address IPV issues, while disregarding co-occurring IPV and substance abuse. Furthermore, the sample in the Buttell and Pike (17) study were from a rural area in a southern state, and thus their findings may be less generalizable to different geographical regions. Two other studies by Buttell and Carney, (15, 16) investigated racial differences in the effectiveness of a 26-week court-mandated batterer intervention group. Outcome variables included measures of socially desirable responding, self-deception, passive – aggressive behavior toward one's partner, assertiveness toward one's partner, controlling behavior, and propensity for physical abuse. These two studies showed mixed results with respect to intervention efficacy, but there were no differences in treatment outcome between Caucasian and African-American IPV offenders. However, these studies only analyzed outcomes

related to domestic violence, which likely does not represent the subsample of IPV offenders with co-occurring substance abuse issues.

In summary, we have shown that among substance dependent IPV offenders, at baseline, African-American men spent more time incarcerated in their lifetime than Caucasian men. In terms of treatment outcomes, both Caucasian and African-American IPV offenders showed a reduction in the reported use of physical violence and alcohol over treatment; Caucasian men showed a decrease in the reported use of verbal abuse, but African-American men showed no change. It is important to note, however, that limitations of our study include the small sample size and the use of self-report measures for data on substance abuse, use of violence, incidence of IPV, and legal characteristics (e.g., arrest history).

To our knowledge, the present study is the first to examine racial differences in treatment effect among substance dependent IPV offenders in an integrated SADV treatment. More research is needed to better understand the prevalence of specific types of IPV (e.g., physical, verbal, psychological, etc.) within this particular subpopulation. Since African-American IPV offenders had a less significant treatment effect for reductions in verbal abuse, future research should thoroughly assess patterns of verbal and non-verbal communication while examining racial differences in treatment outcomes among substance dependent IPV offenders. Moreover, for African-American IPV offenders, it may be beneficial to extensively focus on communication skills in addition to the SADV treatment to decrease the use of verbal abuse and improve efficacy for African American men.

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TABLE 1

Overall demographic characteristics and demographic differences between Caucasian and African-American men in SADV treatment.

Characteristic	Overall (n = 75) n (%)	Caucasian (n = 39) n (%)	African American (n = 36) n (%)	χ^2	p-value ^a
Education					
HS/GED	60 (71)	29 (48)	31 (52)	.00	.97
Marital status					
Married	23 (38)	11 (48)	12 (52)	.41	.81
Separated/Divorced	23 (27)	12 (52)	11 (48)		
Never married	30 (35)	13 (43)	17 (57)		
Employed full-time	53 (62)	25 (47)	28 (53)	.00	1.00
	Mean (SD)	Mean (SD)	Mean (SD)	t	p-value ^a
Age	39 (21)	38.56 (9.20)	38.38 (8.77)	.09	.93
Age of first arrest	24.66 (11.35)	24.28 (11.96)	25.00 (11.48)	-.28	.78
Age of first IPV incident	34.14 (9.69)	34.50 (10.41)	33.88 (9.12)	.28	.78
Income in month prior to treatment	2976.62 (4947.79)	4147.58 (6526.84)	1864.25 (2435.16)	1.46	.15
Number of times arrested for IPV	2.07 (1.69)	2.08 (2.29)	2.05 (1.65)	.07	.94
Lifetime months incarcerated	5.62 (15.15)	1.18 (4.87)	9.49 (9.53)	-2.57	.01
Age of first substance use					
Alcohol	17.32 (3.90)	16.81 (3.56)	17.82 (4.18)	-1.12	.27
Marijuana	17.23 (2.98)	17.08 (2.55)	17.42 (3.52)	-.37	.72
Cocaine	24.83 (8.44)	21.69 (4.82)	27.24 (9.88)	-.06	.96
Heroin	16.25 (4.11)	16.00 (1.22)	16.33 (5.03)	-2.02	.05
Substance use 28-days prior to treatment	5.95 (6.51)	6.41 (7.17)	5.54 (5.95)	.57	.57

^aDemographic differences, Caucasian versus African-American men in SADV condition; derived from *t*-tests for continuous measures and from chi-square tests for categorical measures.

Estimated Marginal Means $\pm$ SE for violence and substance use variables from baseline to treatment completion derived from linear mixed models.

TABLE 2

Variable	Caucasian (<i>n</i> = 39)	African American (<i>n</i> = 36)	Time	Race	Race by Time
CTS-2 Physical Violence					
Baseline	.70 $\pm$ .10	.67 $\pm$ .10		<.001	
Treatment completion	.08 $\pm$ .13	.25 $\pm$ .11			
CTS-2 Verbal Abuse					
Baseline	.85 $\pm$ .10	.67 $\pm$ .10		<.001	
Treatment completion	.21 $\pm$ .12	.48 $\pm$ .11			
CTS-2 Psychological Abuse					
Baseline	.15 $\pm$ .07	.19 $\pm$ .07		.09	
Treatment completion	.01 $\pm$ .09	.06 $\pm$ .08			
ASI Alcohol Composite Score					
Baseline	.18 $\pm$ .34	.20 $\pm$ .03		.001	
Treatment completion	.03 $\pm$ .04	.14 $\pm$ .34			
ASI Drug Composite Score					
Baseline	.02 $\pm$ .01	.05 $\pm$ .01		.40	
Treatment completion	.01 $\pm$ .01	.04 $\pm$ .01			