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The relationship between spirituality and aggression in a sample of men in residential substance use treatment

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Abstract

There is a robust literature documenting that aggression perpetration is increased among individuals in treatment for substance use. Although aggression decreases with successful substance use treatment, a substantial number of patients continue to engage in aggression following treatment. Thus, continued research is needed on potential protective factors for aggression that could be enhanced during substance use treatment. The current study examined the relationship between spirituality and aggression among men in residential treatment for substance use ($N = 398$), as many substance use treatment programs employ spirituality-based interventions. Findings demonstrated that spirituality was negatively associated with attitudinal, physical, and verbal aggression, as well as a composite aggression score. Moreover, spirituality remained negatively associated with aggression after controlling for age, alcohol use and problems, and drug use and problems. These findings provide preliminary evidence for the association between spirituality and aggression among men in treatment for substance use. Continued research is needed in this area, particularly longitudinal and treatment outcome research.

Keywords

Aggression; spirituality; substance use

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It is well documented that men with substance use problems, including those in treatment for a substance use disorder, are at increased risk for aggressive behavior (Hoaken & Stewart, 2003). Part of the reason for this increased risk for aggressive behavior likely stems from substance use temporally preceding and increasing the risk for violence (Mulvey et al., 2006; Stuart et al., 2013; Shorey et al., 2014), since substance use affects information processing capabilities and reduces the ability to respond to conflictual situations non-aggressively (Giancola, Josephs, Parrott, & Duke, 2010; Steele & Josephs, 1990). Further

supporting the link between substance use and aggression, research shows that treatment for substance use results in reduced aggressive behavior following treatment (Stuart, O'Farrell, & Temple, 2009), with relapse to substance use increasing aggressive behavior (O'Farrell et al., 2004). However, not all violence is preceded by substance use (Giancola et al., 2010), even among individuals in substance use treatment. Thus, the examination of risk and protective factors for aggression among men in substance use treatment is an important area of investigation. Research in this area could potentially inform substance use treatment programs on treatment targets that could help to reduce aggressive behavior. One potential protective factor for aggression among men in substance use treatment, which has received extensive attention within the substance use literature, but minimal attention with aggression, is spirituality.

Spirituality

Spirituality has been defined in various ways, making it a difficult construct to investigate empirically. In the current study we measured spirituality with the Daily Spiritual Experience Scale (DSES; Underwood & Teresi, 2002), which assess ordinary spiritual experiences (e.g., gratitude, sense of connection) and "experiences of relationships with, and awareness of, the divine or transcendent and how beliefs and understandings form part of moment-to-moment features of life from a spiritual or religious perspective" (Underwood, 2011, p. 30). The conceptualization of spirituality by the DSES is theorized to transcend the confines of particular religions (Underwood & Teresi, 2002). In addition, it is more concerned with subjective feelings and thoughts related to spirituality than spiritual engagement (e.g., religious service attendance). Shorkey, Uebel, and Windsor (2008) stated that "the usefulness of this scale [the DSES] for assessing the spiritual experience of a person in treatment and recovery may be profound" (p. 291). Thus, the use of the DSES as one way to conceptualize spirituality is supported in the literature and, therefore, is used in the current study as the conceptualization of spirituality. In the absence of a more comprehensive assessment of spirituality, which could include beliefs, practices, and culture, the DSES has been shown to be a useful proxy measure for the breadth of this complex and multifaceted construct (Underwood, 2011).

Spirituality, Substance Use, and Aggression

Many substance use treatment modalities, such as 12-step treatments (i.e., Alcoholics Anonymous [AA] and Narcotics Anonymous [NA]), view spirituality as a central component to successful recovery from substance misuse. That is, there is often a strong emphasis placed on developing a relationship with a "higher power," which they view as essential for successful and sustained recovery from substance use (AA World Services Inc., 2001). Not surprisingly, research has supported the relationship between spirituality and substance use outcomes, such that higher spirituality is associated with lower substance use in the general population (DeWall et al., 2014), and that individuals higher in spirituality report less substance use after treatment relative to individuals lower in spirituality (e.g., Piderman, Schneekloth, Pankratz, Stevens, & Altchuler, 2008; Robinson, Cranford, Webb, & Brower, 2007; Robinson, Krentzman, Webb, & Brower, 2011).

There is, however, minimal research on the association between spirituality and aggression perpetration. In fact, the majority of studies on spirituality and aggression have focused on how spirituality buffers victims of aggression from developing negative mental health outcomes (e.g., Watlington & Murphy, 2006). Among college students, studies show that higher levels of spirituality are associated with lower levels of dispositional aggressiveness (Leach, Berman, & Eubanks, 2008); spirituality is unrelated to relational aggression perpetration (Weber & Kurpius, 2012); and spirituality is marginally, but positively, correlated with increased aggression (Webb, Dula, & Brewer, 2012). Thus, research on the relationship between spirituality and aggression among college students is inconsistent. Research with Latino community couples, however, has demonstrated spirituality to be negatively associated with psychological aggression (Austin & Falconier, 2012). We are unaware, however, of any research that has examined whether spirituality is associated with aggression among men in substance use treatment. Given the high rates of aggression among men in substance use treatment, and the importance of spirituality to substance use treatment programs, knowledge of this association may have important clinical implications.

Current Study

Based on previous research demonstrating that both aggression and spirituality are important factors to consider among men in substance use treatment, and limited and inconsistent research on the association between spirituality and aggression, we examined whether spirituality was associated with aggression among men in residential treatment for substance use. We examined three different types of aggression (attitudinal, physical, and verbal) and examined the relationship between spirituality and aggression after controlling for known predictors of aggression (age, alcohol use, and drug use; O'Leary, 1999; Stuart et al., 2008). Due to limited research in this area, no *a priori* hypotheses were made.

Method

Participants and Procedures

Medical records from a private residential substance use treatment facility, which is located in the Southeastern United States, were reviewed for the current study. Specifically, we reviewed the treatment records of men in the adult residential program at this facility. Admission criteria for the adult residential program include being approximately 25 years of age or older and having a primary substance use disorder diagnosis. The treatment facility utilizes a 28–30 day program, guided by the traditional AA/NA 12-step model. After admission and medical detoxification (if necessary), patients complete a number of self-report measures as part of their intake process (discussed below). Substance use disorder diagnoses were based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition – Text Revision (DSM-IV-TR) criteria (American Psychiatric Association, 2000). Diagnoses were made through consultation and the consensus of a licensed psychologist, a psychiatrist, a general physician, and substance abuse counselors. Patients were informed that their medical records may be de-identified and utilized for research as part of their treatment informed consent. All procedures were approved by the Institutional Review Board of the last author.

Medical records were examined from October 2012 to March 2014 in the current study. This resulted in 398 male patients. The primary diagnoses for this sample included alcohol dependence (57.2%), opioid dependence (17.5%), and polysubstance dependence (8.1%). The remaining patients had a mix of primary substance use diagnoses (e.g., cannabis dependence; amphetamine dependence). The mean age of patients was 41.51 ($SD = 10.51$). The mean number of years of education completed was 13.74 ($SD = 2.01$). The majority of patients were non-Hispanic Caucasian (91.4%). The remaining self-reported racial/ethnic groups were African American (4.8%), Hispanic (2.0%), and “other” (e.g., Indian descent; 1.8%). Approximately half of the sample was married at the time of treatment (45.5%). A subsample ($n = 116$) of these men have been reported on elsewhere (CITATION WITHHELD FOR REVIEW).

Measures

Spirituality—We employed The Daily Spiritual Experiences Scale (DSES; Underwood & Teresi, 2002) to examine patients’ spirituality. This 16-item self-report measure examines (a) ordinary spiritual experiences, (b) one’s relationship with, and awareness of, the divine or transcendent, and (c) how beliefs influence moment-to-moment features of life as understood from a spiritual or religious perspective. The DSES was developed to be relevant for individuals with either theistic religious or non-theistic views. Example items include “I find comfort in my religion or spirituality” and “I feel God’s love for me, directly.” The DSES instructions inform respondents that a number of items use the word “God” and, if they are not comfortable with this, they should substitute another word that corresponds to the divine or holy for them. The first 15-items ask individuals to rate how often they have each experience (1 = never or almost never; 6 = many times a day). The last item (“In general, how close do you feel to God?”) is rated on a 4-point scale (1 = not at all; 4 = as close as possible). All items are summed and higher scores correspond to greater levels of spirituality. The DSES has demonstrated good psychometric properties (Underwood, 2011).

Aggression—We utilized the aggression subscales from the Personality Assessment Inventory (PAI; Morey, 1991) to assess patients’ aggressive behavior. The PAI contains three aggression subscales, including attitudinal (easily angered, low anger control, and perceived by others to be hostile), physical (prone to physical displays of anger, such as physical fights and damage to property), and verbal (tendency to be verbally aggressive [e.g., insulting, verbally threatening] with little or no provocation). These subscales can be combined into an overall aggression composite score. Scores for each subscale are represented by T scores, with scores of 59 or below indicative of minimal to no aggressive problems; 60–64 suggestive of impatience, irritability and quick-tempered; 65–69 are individuals who are easily provoked; and 70 or higher are chronically angry and hostile, with a pronounced potential for aggression. The psychometric properties of the PAI are well documented, including the psychometric properties of the aggression scales (Crawford, Calhoun, Braxton, & Beckham, 2007; Morey, 1991).

Alcohol Use—The Alcohol Use Disorders Identification Test (AUDIT; Saunders, Asaland, Babor, de la Fuente, & Grant, 1993) was employed to assess patients’ alcohol use in the 12 months prior to treatment. The AUDIT is one of the most widely used measures of alcohol

use and contains 10-items that examine symptoms of dependence or tolerance, negative consequences due to alcohol use, and the frequency and intensity of alcohol consumption. The psychometric properties of the AUDIT have been established across many populations (Babor, Higgins-Biddle, Saunders, & Monteiro, 2001).

Drug Use—The Drug Use Disorders Identification Test (DUDIT; Stuart, Moore, Kahler, & Ramsey, 2003; Stuart, Moore, Ramsey, & Kahler, 2004) was used to assess patients' drug use in the 12 months prior to treatment. The DUDIT specifically examines 7 different classes of drugs (cannabis, cocaine, hallucinogens, stimulants, sedatives/hypnotics/anxiolytics, opiates, and other substances [e.g., steroids, inhalants]). The 14-items of the DUDIT examines the frequency of drug use across the 7 different classes of drugs, as well as symptoms that may indicate tolerance or dependence. The DUDIT has demonstrated good psychometric properties (Stuart et al., 2004; 2008).

Results

All analyses were conducted using SPSS version 18.0. We first examined bivariate correlations among study variables, which are displayed in Table 1. Results demonstrated that spirituality was negatively associated with all four indicators of aggression. In addition, age was inversely correlated with all four indicators of aggression. Drug use was positively associated with all four indicators of aggression, whereas alcohol use was not associated with any indicator of aggression.

We next examined whether spirituality remained associated with aggression after controlling for age, alcohol use, and drug use. To examine this, hierarchical multiple regressions were employed. In the first step, age, alcohol use, and drug use were entered as predictors of aggression. In the second step, spirituality was added as a predictor. These analyses were repeated for each type of aggression.

As displayed in Table 2, the inclusion of spirituality accounted for unique variance in all indicators of aggression. Specifically, spirituality remained significantly associated with all four indicators of aggression. Drug use also remained associated with all four indicators of aggression, and alcohol use became positively associated with all indicators of aggression other than verbal.

Discussion

Prior research has documented the importance of spirituality to substance use treatment. In addition, prior research has revealed the problem of aggression among men in treatment for substance use. However, no known research has examined the association between spirituality and aggression among men in substance use treatment, despite spirituality potentially being a protective factor for aggression. Thus, we examined this association in the current study among a sample of adult men in substance use treatment.

Results demonstrated self-reported spirituality to be negatively associated with attitudinal, physical, and verbal aggression, as well as the composite aggression score consisting of the three distinct types of aggression. Importantly, this negative relationship between spirituality

and aggression remained after controlling for robust predictors of aggression, including age, alcohol use and problems, and drug use and problems. These findings are consistent with some prior research with college students and Latino couples demonstrating a negative relationship between spirituality and aggression (Austin & Falconier, 2012; Leach et al., 2008). Our findings also extend the extant literature by examining three different types of aggression, as most previous studies have only examined one type of aggression as related to spirituality.

Directions for Future Research

Because the results of the current study are preliminary, there are a number of areas for future research on the relationship between spirituality and aggression. First, due to the inconsistent findings reported in the literature, our findings need to be replicated in additional samples of men in treatment for substance use. Research is also needed to understand the mechanism(s) linking spirituality and aggression. For instance, recent research suggests that self-control serves as a mediator of the relationship between various indicators of spirituality and substance use (DeWall et al., 2014). Aggression, in part, is believed to result from a lack of self-control (Finkel, 2007). Thus, it is possible that self-control may mediate the relationship between spirituality and aggression.

Another interesting area for future research is to determine whether interventions aimed at enhancing spirituality for men in substance use treatment, such as AA/NA interventions, would have the concurrent benefit of reducing aggression. As mentioned earlier, aggression decreases following substance use treatment, particularly for individuals who remain remitted (O'Farrell et al., 2004). However, the majority of the research in this area has focused on cognitive-behavioral interventions for substance use (e.g., Behavioral Couples Therapy for substance use), which usually do not include spirituality components. It is possible that interventions aimed at reducing substance use, while also focusing on enhancing spirituality, would reduce aggression to a greater extent than substance use focused interventions that do not include a spirituality component.

Limitations

The current study is not without its limitations. Our sample was comprised of men who were primarily non-Hispanic Caucasian, which limits the generalizability of our findings to more diverse samples of men in substance use treatment. Future research should also examine the relationship between spirituality and aggression among women in substance use treatment. The cross-sectional design of our study does not allow for the determination of whether spirituality predicts aggression over time. Because it is possible that aggression negatively impacts spirituality, longitudinal research is needed to explore these associations. Our self-report measures of spirituality and aggression both had a number of limitations. Although the DSES is a widely used measure for assessing spirituality, it examines the construct unidimensionally. However, theory and research suggests that spirituality is likely best represented by a multidimensional assessment (Underwood, 2011). Therefore, future research should include multiple assessment instruments for spirituality to examine its multidimensional features. Our measure of aggression could be improved in future research by also examining aggression perpetrated against specific individuals (e.g., intimate

partners) and other forms of aggression (e.g., sexual aggression; stalking). Finally, the substance use facility where charts were reviewed does not conduct structured diagnostic interviews, making the reliability of patient diagnoses difficult to determine.

Conclusion

In summary, this is the first known study to examine the relationship between spirituality and aggression among men in substance use treatment, a population known to have increased rates of aggression. Findings demonstrated that spirituality was negatively associated with all four indicators of aggression, even after controlling for robust predictors of aggression (i.e., alcohol and drug use and problems). These results provide preliminary evidence that spirituality may be an important protective factor for aggression perpetration and future research should replicate and extend our findings.

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Table 1

Bivariate correlations, means and standard deviations among study variables.

	1.	2.	3.	4.	5.	6.	7.	8.
1. Age	---	.23***	.12*	-.39***	-.20***	-.15**	-.28***	-.13*
2. Spirituality		---	-.04	-.13**	-.22***	-.18***	-.24***	-.16**
3. Alcohol Use and Problems			---	-.37***	.02	.07	.05	-.05
4. Drug Use and Problems				---	.28***	.20***	.34***	.23***
5. Aggression Composite					---	.91***	.88***	.85***
6. Attitudinal Aggression						---	.74***	.67***
7. Physical Aggression							---	.62***
8. Verbal Aggression								---
<i>M</i>	41.51	54.74	15.73	10.33	52.04	51.80	54.25	49.54
<i>SD</i>	10.51	19.48	11.19	12.40	12.69	12.05	13.71	10.48

* $p < .05$,

**

 $p < .01$,

 $p < .001$

Table 2

Hierarchical Regression Analyses Predicting Aggression

	Verbal Aggression β (SE)	Physical Aggression β (SE)	Aggressive Attitude β (SE)	Aggression Composite β (SE)
Model 1	$R^2 = .05$	$R^2 = .17$	$R^2 = .06$	$R^2 = .10$
Alcohol Use and Problems	.04 (.05)	.20 (.06) ***	.16 (.06) **	.15 (.06) **
Drug Use and Problems	.22 (.05) ***	.34 (.06) ***	.23 (.06) ***	.29 (.06) ***
Age	-.05 (.05)	-.16 (.07) **	-.07 (.06)	-.10 (.06)
Model 2	$R^2 = .07$ ($R^2 = .02$)	$R^2 = .19$ ($R^2 = .02$)	$R^2 = .08$ ($R^2 = .02$)	$R^2 = .13$ ($R^2 = .03$)
Alcohol Use and Problems	.03 (.05)	.18 (.06) ***	.15 (.06) **	.13 (.06) *
Drug Use and Problems	.20 (.05) ***	.33 (.06) ***	.22 (.06) ***	.27 (.06) ***
Age	-.02 (.05)	-.13 (.06) *	-.04 (.06)	-.07 (.06)
Spirituality	-.14 (.03) **	-.16 (.03) **	-.14 (.03) **	-.16 (.03) **

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