

RESEARCH ARTICLE

Spirituality and the treatment of substance use disorders: an exploration of forgiveness, resentment and purpose in life

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Faith-based treatment programs are a viable treatment option for many individuals with substance use disorders; however, the psychological mechanisms that explain the relationship between spirituality and a recovery from substance use disorders have not been established. The Spirituality, Forgiveness, and Purpose (SFP) model of recovery proposes that forgiveness and purpose in life may mediate the spirituality–recovery relationship. As a preliminary step in exploring this theory, a cross-sectional investigation of 277 clients of the Australian Salvation Army Rehabilitation Service Centres was performed. A multiple regression found that forgiveness of others, forgiveness of self, receiving forgiveness from others, and receiving forgiveness from God predicted resentment. Furthermore, multiple mediation analyses found that forgiveness of self and receiving forgiveness from others and God mediated the relationship between daily spiritual experiences and purpose and engagement in life.

Keywords: *Substance abuse, Twelve Steps, spirituality, forgiveness, purpose in life, resentment*

INTRODUCTION

Spirituality plays an important role in many faith-based substance use disorder (SUD) treatment settings. For example, major world religions commonly promote abstinence and denounce intoxication, Christian faith-based programs are historically one of the primary providers of SUD treatment (Cook, 2006; Hester, 2002), and the spiritually-based Twelve Steps

of Alcoholic Anonymous (AA) propose that recovery from SUDs occurs via the acceptance of a Higher Power (AA World Services Inc., 1981, 2001). Empirical research has also shown negative associations between religiosity and substance use (Gorsuch & Butler, 1976; Kendler, Gardner, & Prescott 1997; Koenig, George, Meador, Blazer, & Ford 1994).

Although empirical evidence suggests a positive spirituality-recovery relationship (Kaskutas, Turk, Bond, & Weisner 2003; Piderman, Schneekloth, & Pankratz, 2008; Sterling et al., 2007; Zemore, 2007), the mechanisms of this relationship are unclear. Furthermore, as evidenced-based practice is playing an increasingly important role in the funding decisions of service providers, it is becoming equally important to identify how or whether spiritual development promotes recovery. This is particularly relevant to those faith-based organizations that explicitly incorporate spirituality into their treatment programs and to SUD services that utilize the Twelve Steps of AA: one of the most dominant frameworks for SUD treatment services.

Despite the need for research on spirituality and the treatment of SUDs, the task is hindered by the fact that spirituality is a difficult construct to both define and measure. What is now generally accepted is that spirituality is multidimensional and therefore best measured by using a battery of instruments that can capture this diversity. For this study, spirituality is conceptualized as a multidimensional construct that broadly involves a person's beliefs, behaviors, feelings, and experiences that are derived from a relationship with the transcendental. Although debate exists as to whether religion and spirituality are distinct or related constructs (Hood, Hill, & Spilka, 2009), we adopt the view that spirituality is broader than religion, with religion being a formalized and an institutionalized

method of cultivating spirituality. The conceptualization of religion as being a subset of spirituality is becoming increasingly common among researchers of religion and spirituality (Hood et al., 2009).

The cultivation of spirituality plays an important role in Twelve Step treatments as it proposes that spiritual growth addresses two common barriers to recovery: pride and resentment (Lyons, Deane, & Kelly 2010). In this philosophy substance abusers are described as frequently being self-centered individuals who: have little insight regarding their role in interpersonal conflicts and resulting cravings for substance use; deny engagement in problematic substance use behaviors; are reluctant to seek or maintain treatment; and are resistant to changing their substance use behaviors (AA World Services Inc., 2001).

The important role of motivational enhancement in SUD treatment (Blume, 2005; Ritter & Lintzeris, 2004; Stroebe, 2000) supports the view that this population is often resistant to change. Furthermore, substance abusers have been shown to have higher levels of trait anger than normal populations (Lin, Enright, Krahn, Mack, & Baskin, 2004) and described as often being rebelliousness and resentful towards society (Enright & Fitzgibbons, 2000) and lacking in purpose and meaning in life (Miller, 1998; Waisbergm & Porter, 1994). In particular, the Twelve Steps emphasize resentment as a hindrance to recovery, calling it the “number one” barrier. In contrast, forgiveness requires humility, insight, and a desire to release resentment and entitlements. The development of forgiveness in substance abusers is theorized to address these barriers (Lyons et al., 2010).

Similar to the multidimensional nature of spirituality, there are various types of forgiveness that may be applicable to an investigation of its role in SUD treatment. Forgiveness can be an interpersonal or intrapersonal construct and can include: forgiveness of others; forgiveness of oneself; receiving forgiveness from others; and receiving forgiveness from God (Walker & Gorsuch, 2002). Forgiveness can also be conceptualized as a dispositional or a state construct (Thompson & Snyder, 2003). The majority of empirical research in forgiveness has focused on trait and state forgiveness of others.

Recently we presented the Spirituality, Forgiveness and Purpose model of substance use disorders (SFP model) (Lyons et al., 2010). This model theorized that forgiveness operates as a “spiritual mechanism” of recovery that mediates (or partially mediates) the relationship between spirituality and a recovery from SUDs by addressing resentment and increasing purpose in life (Lyons et al., 2010). There is a preliminary empirical evidence to support this theory. For example, forgiveness has been shown to be positively associated with spirituality and post-treatment abstinence (Webb, Robinson, Brower, & Zucker, 2006). Furthermore, forgiveness-based therapy has been shown to be more effective than drug and alcohol counseling in the

treatment of SUDs through its positive association with self-esteem, and negative association with depression, anxiety, trait anger, and vulnerability to drug use (Lin et al., 2004).

It is important to clarify that in the SFP model the purpose in life is understood to be, “the subjective reason for a person’s existence, which is derived from their beliefs, values and dispositions and used to produce and manage life goals” (Lyons et al., 2010, p. 537). Based on this conceptualization, following one’s purpose in life naturally leads to a greater engagement in valued activities. Hence, throughout this article we refer to this process by using the terms “purpose in life” and “purpose and engagement in life”. In addition, purpose in life is also highly relevant to religion and spirituality (Hood et al., 2009; Miller, 1998) and it is possible that some may see them as actually being dimensions of religion and spirituality. However, purpose and engagement in life are not only unique to just religious and spiritual individuals but are also experienced by all, regardless of whether they are religious, spiritual or secular. Therefore, we conceptualize purpose and engagement in life as being separate from but highly relevant to a person’s spirituality or religiosity. From a religious perspective, following a divinely inspired purpose in life cultivates a connection with God (Boice, 1986). Therefore, we also acknowledge that the relationship between spirituality and purpose in life is likely to be bidirectional with spirituality cultivating purpose in life which reinforces spirituality. The focus of this study is on how spirituality predicts purpose and engagement in life.

Due to the multidimensional nature of spirituality and forgiveness, there are many unclear associations between these constructs and their subsequent role in the treatment of SUDs. In particular, it is unclear: whether all types of forgiveness are predicted by spirituality and by which dimensions of spirituality; whether all types of forgiveness are negatively associated with resentment; and whether spirituality operates on recovery by increasing forgiveness and subsequent purpose and engagement in life. The purpose of this study was to clarify these relationships. First, it was hypothesized that the different types of forgiveness (forgiveness of other, forgiveness of self, receiving forgiveness from others, and receiving forgiveness from God) would negatively predict resentment. Secondly it was hypothesized that the relationship between spirituality (spiritual beliefs, spiritual practices, and spiritual experiences) and purpose in life would be mediated by different types of forgiveness.

METHOD

Participants

Data for this study was obtained from eight Australian Salvation Army Recovery Service Centres located in New South Wales, Queensland, and the Australian

Table I. Participants' demographical data.

		<i>n</i>	
Gender (%)	Male	81.6	277
	Female	18.4	
Age	(M)	36.8	275
	(SD)	9.9	
Years with substance use problem	(M)	19.0	265
	(SD)	23.1	
Weeks in treatment	(M)	16.2	272
	(SD)	12.9	
Times previously treated	(M)	1.4	271
	(SD)	1.9	
Primary substance (%)	Alcohol	55.6	259
	Amphetamines	20.8	
	Cannabis	9.7	
	Heroin	6.2	
	Other	7.7	

Capital Territory. These Recovery Service Centres utilize Twelve Step and Christian teachings in the provision of an 8–10-month residential rehabilitation program for SUDs. Upon entry to this program, clients systematically progress through three phases of treatment: Assessment (including detoxification), Treatment, and Re-entry. Each phase of treatment provides Twelve Step and CBT-based treatment in the form of group therapy. Individual supportive counseling, psychotherapy and pastoral counselling sessions are also available. Group sessions address a wide range of issues including: anger management, goal setting, stress management, assertiveness training, and relapse prevention. Clients also participate in weekly chapel services, are assisted with locating vocational education and training opportunities, and participate in work program activities, such as: assisting with the preparation of meals; facilitating new clients' transition into the program; and facilitating group support sessions. Clients are typically either self-referred or referred either by health professionals or the legal system.

Three hundred and eleven surveys were administered to clients participating in this treatment program and 303 were returned, resulting in a 97% participation rate. Of the 303 clients who participated in the study, data for 26 participants were illegible or incomplete and removed from the study, resulting in a final sample of 277 participants (91% of the original participant responses). Table I represents participant's demographics and treatment histories.

INSTRUMENTS

Resentment

The Aggression Questionnaire (AQ) measures four dimensions of aggression: physical aggression, verbal aggression, anger, and hostility (Buss & Perry, 1992). It has been shown to have good reliability with

Cronbach's alphas ranging from 0.72 to 0.89 (Buss & Perry, 1992). In this study only the four resentment items of the hostility subscale were used. These items were, "I am sometimes eaten up with jealousy", "At times I feel I have gotten a raw deal out of life", "Other people always seem to get the breaks", and "I wonder why sometimes I feel so bitter about things." This resentment scale (RS) was shown to load onto a single factor which accounted for 64% of the variance among items. Principle component analyses were performed on all measures used in this study. Factor loadings for the RS items ranged from 0.69 to 0.86. Cronbach's alphas for all measures are shown in Table II.

Purpose in life

The Life Engagement Test (LET) (Scheier et al., 2006) measures purpose in life in terms of engaging in valued daily activities. The LET presents participants with six items which are responded to on a five-point Likert scale. Example items include, "There is not enough purpose in my life" and "Most of what I do seems trivial and unimportant". In this study, the LET loaded on to a single factor that accounted for 53% of the variance in items. Loadings ranged from 0.67 to 0.78.

Private spiritual practices

The Religious Background and Behavior Questionnaire (RBB) is a 13-item self-report questionnaire that measures an individual's religious identity and religious practices (Connors, Tonigan, & Miller, 1996). The Recovery Service Centre programs used for this study had compulsory chapel service attendance as part of their program. Hence, the RBB item asking how often a participant "attended worship service" was deemed to potentially be measuring program participation rather than private spiritual practice and was omitted from the analyses. As a result, only five items of the RBB were used to assess participants' private spiritual practices. These items asked how often participants thought about God, prayed, meditated, read scriptures, and had direct experiences of God. Items of this modified RBB loaded onto a single factor that accounted for 64% of the variance. Loadings ranged from 0.49 to 0.76.

Spiritual experiences and feelings

The Daily Spiritual Experiences Scale (DSES) (Underwood & Teresi, 2002) is a commonly used 16-item scale designed to measure day-to-day spiritual experiences across religious orientations. Examples items include: "I feel guided by God in the midst of daily activities"; "I am spiritually touched by the beauty of creation". The DSES has been shown to have good internal reliability ($\alpha = 0.94$ to 0.95) and to be unidimensional, with a trend for a separate second "mercy and compassion" factor (Underwood & Teresi, 2002). This study found the DSES to have a two factor solution. The first factor was composed

Table II. Means and Correlations between variables.

	<i>M</i>	<i>SD</i>	Correlations									
			1	2	3	4	5	6	7	8	9	
1. Purpose and Engagement in Life	22.66	5.14	<i>0.83</i>									
2. Resentment	11.80	3.92	-0.44**	<i>0.81</i>								
3. Daily spiritual experiences	53.45	18.65	0.38**	-0.31**	<i>0.96</i>							
4. Twelve step spiritual beliefs ^a	37.85	1.10	0.25**	-0.23**	0.76**	<i>0.92</i>						
5. Private spiritual practices	22.28	9.40	0.21**	-0.23**	0.69**	0.59**	<i>0.86</i>					
6. Forgiveness of self	26.21	5.52	0.34**	-0.34**	0.40**	0.33**	0.34**	<i>0.60</i>				
7. Forgiveness of others	26.02	6.34	0.20**	-0.27**	0.41**	0.32**	0.29**	0.46**	<i>0.67</i>			
8. Receiving forgiveness from others	15.50	3.58	0.42**	-0.33**	0.27**	0.22**	0.16**	0.33**	0.20**	<i>0.81</i>		
9. Receiving forgiveness from God	15.48	3.59	0.38**	-0.33**	0.54**	0.51**	0.39**	0.36**	0.33**	0.39**	<i>0.73</i>	

Notes: Italicized numerals on the diagonal represent Cronbach's alphas, $n = 273$.

^aUntransformed Twelve Step spiritual beliefs ($M = 29.90$, $SD = 6.96$).

* = $p < 0.05$, ** = $p < 0.01$.

of 14 items with loadings ranging from 0.43 to 0.93 and accounted for 63% of the variance among items. The second factor was composed of three items with loadings ranging from 0.43 to 0.91 and accounted for 8% of the variance. A full scale DSES score was used in all analyses of this study.

Spiritual beliefs

The Spiritual Belief Scale (SBS) is an eight item scale that measures spiritual thinking based on the Twelve-step philosophy of AA. Specifically, the scale has been found to measure two dimensions of spiritual beliefs, "release-gratitude-humility" and "tolerance" (Schaler, 1996). Example items include: "I know I am able to meet life's challenges only with God's help" and "It's only when I stop trying to play God that I can begin to learn what God wants for me". The SBS has been shown to have good internal reliability ($\alpha = 0.92$) (Schaler, 1996). In the current study all items loaded onto a single factor which accounted for 66% of the variance among items. Factor loadings ranged from 0.68 to 0.89.

Dispositional forgiveness of self and others

The Heartland Forgiveness Scale (HFS) measures an individual's dispositional forgiveness of themselves, other people, and situations (Thompson & Snyder, 2003). For this study items relating to a forgiveness of a situation were not used. Only three positively scored items for forgiveness of self (FS) and three positively scored items for forgiveness of others (FO) were used. An example item of the FO is "When someone disappoints me, I can eventually move past it." An example item of the FS is "With time I am understanding of myself for mistakes I've made." In the current study, the FS scale had loadings ranging from 0.72 to 0.78 and accounting for 56% of the variance amongst items. The FO scale had loadings

ranging from 0.75 to 0.82 and accounting for 60% of the variance.

Receiving forgiveness from others and God

The Receiving Forgiveness from Others scale (RFO) (Walker & Gorsuch, 2002) measures how much an individual perceives that other people have forgiven them for offences they have committed. Originally it asked for responses to 20 items separated across four categories; receiving forgiveness from friends, partners, parents, and God. For the purposes of the present study, the friends, partners, and parents categories were grouped together with a single statement; "Respond to these five items while thinking about how you generally feel about the significant people in your life, e.g., friends, family, partners". In the current study, items loaded onto a single factor with loadings ranging from 0.69 to 0.82 and accounting for 79.2% of the variance in responses.

The Receiving Forgiveness from God (RFG) subscale (Walker & Gorsuch, 2002) was used in its original form. This four-item scale measures how much a person perceives God as having forgiven them for their previous offences. In the current study, it was shown to load onto a single factor which accounted for 55% of the variance among items. Factor loadings ranged from 0.52 to 0.061.

Procedure

A single group meeting was held at each Recovery Service Centre where all patients currently in treatment were informed of the purpose of the study and invited to participate. All patients were informed that participation was voluntary and that choosing not to participate would in no way impact upon their treatment or relationship with the Salvation Army. Patients were informed that they could withdraw from the study at anytime. Patients who elected to participate were

provided with an information sheet, self-report questionnaires, and an addressed envelope. No identifying information was provided by participants and no Salvation Army staff members were present at the data collection meetings. The questionnaire took approximately 40 minutes to complete. To return questionnaires, participants were given the option of either using a drop box located in the meeting room or to post their questionnaires via the addressed envelope. Those who did not wish to participate simply returned the incomplete questionnaires into the drop box or by post. The study design was reviewed and approved by the University of Wollongong Human Research Ethics Committee.

RESULTS

Extreme outliers were removed from the data set and missing values were excluded from analyses using listwise deletion. Normality plots and statistical tests of normality were inspected. All constructs were normally distributed with the exception of Twelve Step spiritual beliefs which were shown to be negatively skewed (Kolmogorov–Smirnov = 0.09, $p < 0.001$). Twelve Step spiritual beliefs were transformed at the construct level using a square root transformation. This transformed Twelve Step spiritual beliefs construct was used in the correlation and multiple regression analyses. The transformed construct was not used in the multiple mediation analyses as normality is not an assumption for these analyses (Preacher & Hayes, 2008).

Forgiveness as a predictor of resentment

Correlations presented in Table II provide support for associations between spirituality, forgiveness, resentment, and purpose in life. To test the hypothesis that forgiveness measures would negatively predict resentment, a multiple regression was performed. Resentment was the dependent variable and forgiveness of others, forgiveness of self, feeling forgiven by others, and feeling forgiven by God were entered simultaneously as independent variables. Assumptions of normality, no multicollinearity, and homoscedasticity were met and residuals within the model were independent. The percentage of variance explained in the regression model was significant ($F(4, 268) = 18.38$, $p < 0.001$, $R^2 = 0.21$), with all forgiveness constructs significantly contributing to the model (Table III).

Forgiveness as a mediator of spirituality and purpose in life

Preacher and Hayes' (2008) multiple mediation analyses were used to test the hypothesis that forgiveness would mediate the relationship between spirituality and purpose in life. Mediation occurs when the direct effect of variable X on variable Y is influenced by a mediator (M). Thus, mediation requires: a significant

Table III. Multiple regression results testing forgiveness constructs as predictors of resentment.

Variable	B	SE B	β	R^2
<i>Resentment</i>				
Forgiveness of self	-0.22**	0.08	-0.19	0.21**
Forgiveness of others	-0.12*	0.06	-0.12	
Forgiven by others	-0.21**	0.07	-0.19	
Forgiven by God	-0.16*	0.07	-0.15	

Note: ** $p < 0.01$; * $p < 0.05$

association between X and M (pathway a); a significant association between M and Y (pathway b); a significant indirect effect of X on Y through M (pathway ab); and a significant direct effect of X on Y when controlling for M (c'). Pathway c represents the total effect of variance X on Y , that is the direct effect of X on Y plus the indirect effect of X on Y through M ($c = c' + ab$). Mediation is present when the difference between the total effect (c) and the direct effect (c') is significantly greater than zero (Preacher & Hayes, 2008).

By way of example, spirituality may have a total effect on purpose in life (pathway c). Any variance attributable to the constructs that mediate this relationship, such as forgiveness, is included in this total effect. To demonstrate that forgiveness does mediate the relationship between spirituality and purpose in life then: spirituality must predict forgiveness (pathway a); forgiveness must predict purpose in life (pathway b); and the indirect effect of spirituality through forgiveness to purpose in life must be significant (pathway ab). When this occurs the indirect effect of spirituality on purpose in life through forgiveness (pathway ab) can be subtracted from the total effect (pathway $c - ab$). The resulting being a new pathway (pathway c') that represents the direct effect of spirituality on purpose in life minus the variance attributed to the indirect spirituality-forgiveness-purpose in life relationship ($c' = c - ab$). When this direct pathway (pathway c') is significantly less than the original, total effect (pathway c) mediation has occurred (Figure 1a–c).

One method of testing mediation when there are j number of mediators is to conduct a series of separate mediation analyses. However, an alternative is Preacher and Hayes' (2008) multiple mediation analysis with bootstrap resampling, which allows the indirect and direct effects of j number of mediators to be analyzed concurrently. According to Preacher and Hayes (2008), multiple mediation analysis is a more advantageous method of testing multiple mediations than Sobel's testing, the product of coefficients testing, or Baron and Kenny's (1986) causal step approach, because it maintains statistical power while controlling for Type I errors and is also free from assumptions of normality. Hence, for this study, analyses were

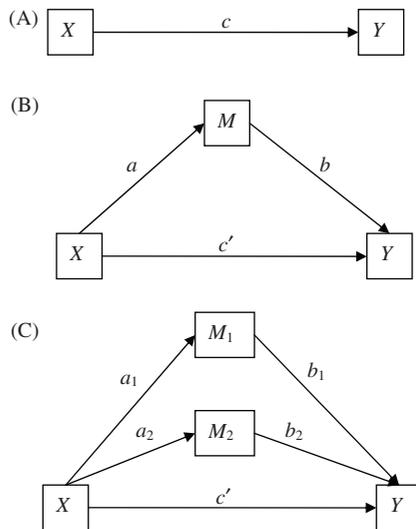


Figure 1. (A) The total effect of X on Y . Mediators are implicitly accounted for within pathway c ; (B) The direct effect of X on Y . A proportion of the variance explained by pathway c is now accounted for by the pathway going from X to M to Y (pathway ab). Hence, c' will be significantly less than pathway c when mediation is present; (C) In a multiple mediation a proportion of the variance explained by the total pathway (c) becomes accounted for by pathway X through M_1 through Y (ab_1), pathway X through M_2 through Y (ab_2), and up to the j th number of mediators in the model (pathway X through M_j through Y [ab_j]).

conducted using Preacher and Hayes (2008) SPSS macros for multiple mediation, while 5000 bootstrap resamples were used to validate the direct and indirect effects of the mediation pathways. Readers unfamiliar with these processes may benefit from reviewing Baron and Kenny (1986) and Preacher and Hayes (2008).

There were three measures of spirituality in this study (Twelve Step spiritual beliefs, private spiritual practices, and daily spiritual experiences) so three multiple mediation analyses were conducted. Each analysis used a different measure of spirituality as the exogenous/independent variable while controlling for the other two spirituality measures. In each analysis purpose in life was the endogenous/dependent variable, and forgiveness of self, forgiveness of others, receiving forgiveness from others, and receiving forgiveness from God were mediators. Results from the three multiple mediation models are shown in Table IV.

Twelve Step spiritual beliefs predicted receiving forgiveness from God ($B=0.126$, $p<0.01$); while receiving forgiveness from others ($B=0.391$, $p<0.001$), receiving forgiveness from God ($B=0.216$, $p<0.05$), and forgiveness of self ($B=0.237$, $p<0.05$) predicted purpose in life. However, neither the total effect of Twelve Step spiritual beliefs on purpose in life ($c=-0.060$, $p=0.357$), nor the direct effect of Twelve Step spiritual beliefs on purpose in life while controlling for forgiveness variables ($c'=-0.097$, $p=0.113$) were

significant; indicating that Twelve Step spiritual beliefs and purpose in life were not mediated by forgiveness constructs. Similarly, in the second multiple mediation model, private spiritual practices did not predict any forgiveness variables. The non-significant total effect ($c=-0.055$, $p=0.196$), direct effect ($c'=-0.056$, $p=0.161$) and 95% confidence intervals (Table V) show that the relationship between private spiritual practices and purpose in life were not mediated by forgiveness variables.

The third multiple mediation model (Figure 2 and Table IV) revealed that daily spiritual experiences predicted receiving forgiveness from others ($B=0.050$, $p<0.001$); receiving forgiveness from God ($B=0.067$, $p<0.001$); forgiveness of others ($B=0.091$, $p<0.001$); and forgiveness of self ($B=0.053$, $p<0.001$). Bootstrapping found a significant indirect effect for receiving forgiveness from others ($B=0.020$, $p<0.001$, 95% CI [0.006, 0.041]), receiving forgiveness from God ($B=0.015$, $p<0.001$, 95% CI [0.001, 0.033]), and forgiveness of self ($B=0.013$, $p<0.001$, 95% CI [0.002, 0.031]). When forgiveness mediators were entered into the model, the total effect of daily spiritual experiences on purpose in life ($c=0.141$, $p=0.000$) decreased but remained significant ($c'=0.100$, $p=0.000$); indicating that forgiveness of self, receiving forgiveness from others and receiving forgiveness from God partially mediated daily spiritual experiences and purpose in life.

Spiritual beliefs and practices as predictors of spiritual experiences

The previous analyses found that Twelve Step spiritual beliefs and private spiritual practices did not predict forgiveness or purpose in life. This was unexpected as religious and spiritual literature stress the importance of faith and spiritual practices as mechanisms for cultivating a relationship with the transcendental (Boice, 1986; Maheshwarananda, 2000). The Twelve Steps of AA have a similar conceptualisation as demonstrated by their slogan 'fake it till you make it' (Robinson, Cranford, Webb, & Brower, 2007). Empirical research also supports the importance of practice in cultivating spirituality (Palouztian, Richardson, & Rambo, 1999). Based on this, and to further clarify the relationship between spirituality and purpose in life, we made an additional *post hoc* hypothesis that spiritual beliefs and private spiritual practices would predict spiritual experiences. To test this hypothesis, a second multiple regression was conducted with daily spiritual experiences as the dependent variable and Twelve Step spiritual beliefs and private spiritual practices as the independent variables. Multicollinearity was not present and the assumptions of normality and homoscedasticity were met. The variance in daily spiritual experiences explained by the regression model was significant ($F(2, 274)=305.93$, $p<0.001$, $R^2=0.69$) (Table V).

Table IV. Multiple mediation analyses testing forgiveness as a mediator of spirituality and purpose in life.

Independent variable (IV)	Mediator (M)	Effect of IV on M <i>a</i>	Effect of M on DV <i>b</i>	Indirect Effect <i>ab</i>	Bootstrapping	
					95% Confidence Interval (CI)	
					Lower	Upper
Twelve Step spiritual beliefs ^a	Forgiven by others	0.018	0.391***	0.007	-0.025	0.050
	Forgiven by God	0.126*	0.216*	0.027	0.002	0.069
	Forgiveness of others	-0.015	-0.064	0.001	-0.006	0.021
	Forgiveness of self	0.007	0.237*	0.002	-0.024	0.030
Private spiritual practices ^b	Forgiven by others	-0.024	0.391***	-0.009	-0.035	0.014
	Forgiven by God	0.000	0.216*	0.000	-0.014	0.013
	Forgiveness of others	0.002	-0.064	-0.000	-0.009	0.006
	Forgiveness of self	0.040	0.237*	0.010	-0.002	0.033
Daily Spiritual Experiences ^c	Forgiven by others	0.050*	0.391***	0.020	0.006	0.041
	Forgiven by God	0.067***	0.216*	0.015	0.001	0.033
	Forgiveness of others	0.091***	-0.064	-0.006	-0.023	0.008
	Forgiveness of self	0.053**	0.237*	0.013	0.002	0.031

Notes: Coefficients are unstandardized.

^aControlling for Twelve Step private spiritual practices and daily spiritual experiences.

^bControlling for Twelve Step spiritual beliefs and daily spiritual experiences.

^cControlling for Twelve Step spiritual beliefs and private spiritual practices.

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; R^2 adj. = 0.28.

Table V. Multiple regression results testing Twelve Step spiritual beliefs and private spiritual practices as predictors of daily spiritual experiences.

Variable	<i>B</i>	SE <i>B</i>	β	R^2
<i>Daily spiritual experiences</i>				
Twelve Step spiritual beliefs	9.64***	0.71	0.57	0.69***
Private spiritual practices	0.71***	0.08	0.36	

Note: *** $p < 0.001$.

DISCUSSION

Forgiveness and resentment

The study's first hypothesis, that forgiveness would predict resentment, was supported, with forgiveness of others, forgiveness of self, receiving forgiveness from others, and receiving forgiveness from God, all predicting resentment. In particular, self-forgiveness and receiving the forgiveness of others had greater levels of significance in the multiple regression than forgiving others and receiving forgiveness from God. This highlights their potential role and importance in the treatment of resentment amongst substance abusers.

The Twelve Steps emphasize atonement and reconciliation as important to the recovery process, but there is no research on the role that *receiving* forgiveness plays in the treatment of SUDs. Similarly, the role of forgiveness of self in SUD treatment is also under studied. However, the preliminary research that is available suggests that though forgiveness of self may be important to recovery, it is likely be more difficult

to achieve than forgiveness of others (Webb et al., 2006). Forgiveness of self has also been shown to be more closely related to internalized symptoms of psychopathology (e.g., anxiety) than to external symptoms (e.g., hostility) (Webb, Robinson, & Brower, 2009). Hence, it is likely that our results reflect the internalized nature of forgiveness of self and receiving forgiveness (both from others and God).

Shame is one construct which contributes to the etiology and maintenance of SUDs (Potter-Efron, 2002) and may be particularly relevant to the internalized nature of a forgiveness-resentment relationship. Specifically, the relationship between shame and SUDs has been described as cyclic, with shame leading to the use of substances as a coping mechanism, which in turn promotes more shame, which leads to further substance use (Wiechelt, 2007). In support of this, substance abusers have been shown to have higher levels of shame than the general population (O'Connor, Berry, Inaba, Weiss, & Morrison, 1994). Shame is also positively associated with relapse (Wiechely & Sales, 2001).

Shame fundamentally involves a perception of a flawed self (Wiechelt, 2007): a global negative self-evaluation which produces urges to isolate oneself or externalize blame and hostility (Tangney, Wagner, Fletcher, & Gramzow, 1992; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). Both the isolating and externalizing blame responses are defensive in that they prevent the self from experiencing further painful negative evaluations. Often this externalized blame and hostility can be irrational and has

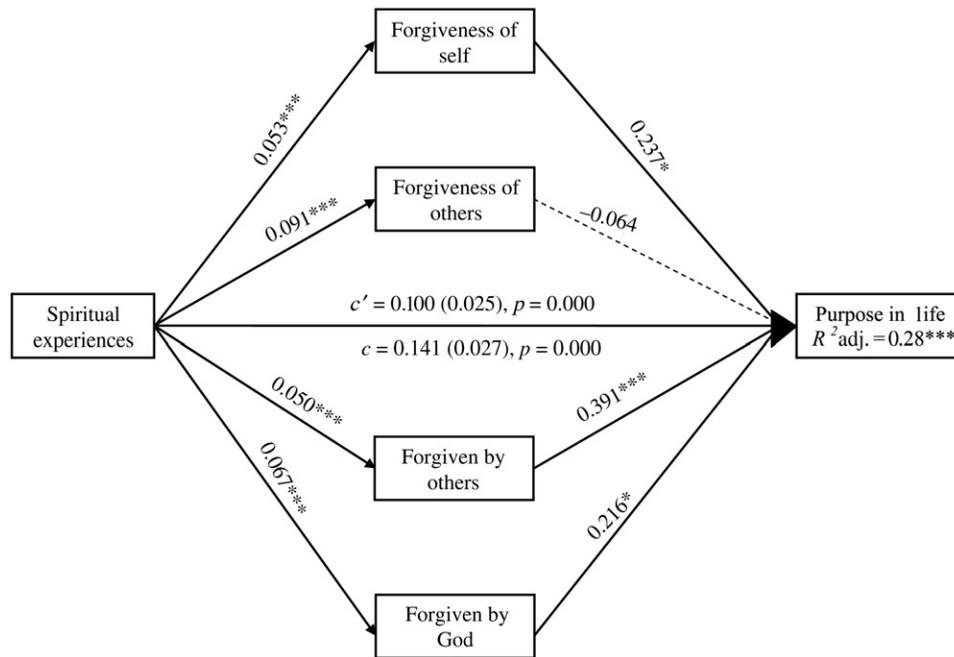


Figure 2. Multiple mediation model testing forgiveness as a mediator between daily spiritual experiences and purpose in life.

Notes: Coefficients are unstandardized and broken lines represent non-significance.

*** = $p < 0.001$; * = $p < 0.05$; c = total effect of X on Y ; c' = direct effect of X on Y via M .

been described as a “humiliated fury” (Lewis, 1971 as cited by Tangney et al., 1996).

Shame-prone individuals have been found to have greater levels of anger, rumination, desires for revenge, and be more likely to defend against shame via the externalization of blame and anger (Stuewig, Tagney, Heigel, Harty, & McCloskey, 2010; Tangney et al., 1992, 1996). Shame has also been negatively correlated with resentment as measured by the Buss–Durkee Hostility Inventory ($r = -0.37$ to -0.45) (the measure used in the current study). Finally, shame has been found to be negatively associated with empathy (Tangney, 1991, 1995) and forgiveness of self (Ranganadhan & Todorov, 2010).

The relationship between resentment, shame, internalized schema of inadequacy, and forgiveness of others is less clear. Forgiveness-based therapies recognize shame and guilt as barriers to forgiveness of others. Hence, these therapies encourage an exploration of shame and guilt and the reasons underlying anger, resentment, and the externalization of blame (Enright, 2001; Enright & Fitzgibbons, 2000; Tibbitts, 2006). However, the overall emphasis of forgiveness of others is *interpersonal*: the regulation of anger and resentment directed toward another for the purpose of self-enhancement (e.g., achieving relief from the pain associated with anger and interpersonal conflicts). Thus, we argue that forgiveness of others may operate on resentment in a different manner to forgiveness of self and receiving forgiveness. Forgiveness of self and receiving forgiveness may be associated with the underlying *intrapersonal* factors of resentment, such as schema of inadequacy and feelings of shame.

In contrast, forgiving others may attend to the product of these feelings; the management of anger and resentment that derive from feelings of inadequacy and shame. Whether these relationships operate on recovery from SUD and whether they do so by disrupting a shame-substance use cycle remains to be tested.

Spirituality, forgiveness, and purpose in life

To clarify the relationships between the dimensions of spirituality, a *post hoc* hypothesis proposed that spiritual practices and beliefs would predict spiritual experiences. This hypothesis was supported with 69% of the variance in daily spiritual experiences being attributable to a person’s private spiritual practices and spiritual beliefs. This significantly clarifies how spirituality and forgiveness operate on purpose and engagement in life by suggesting that the everyday experiences and feelings associated with religiosity/spirituality may in part be a manifestation of an individual’s beliefs and practices; however, further longitudinal research is required to confirm causality. Correlations from the current study also demonstrate that spiritual practices and beliefs are associated at moderate levels. During a spiritual transformation process, changes in beliefs can often follow from changes in spiritual behaviors (Hood et al., 2009). Furthermore, the changes in beliefs are also likely to motivate an individual to further apply themselves to the spiritual practices associated with the exploration and cultivation of their spirituality. Therefore, we hypothesized that the relationship between the dimensions of spirituality is likely to be bidirectional,

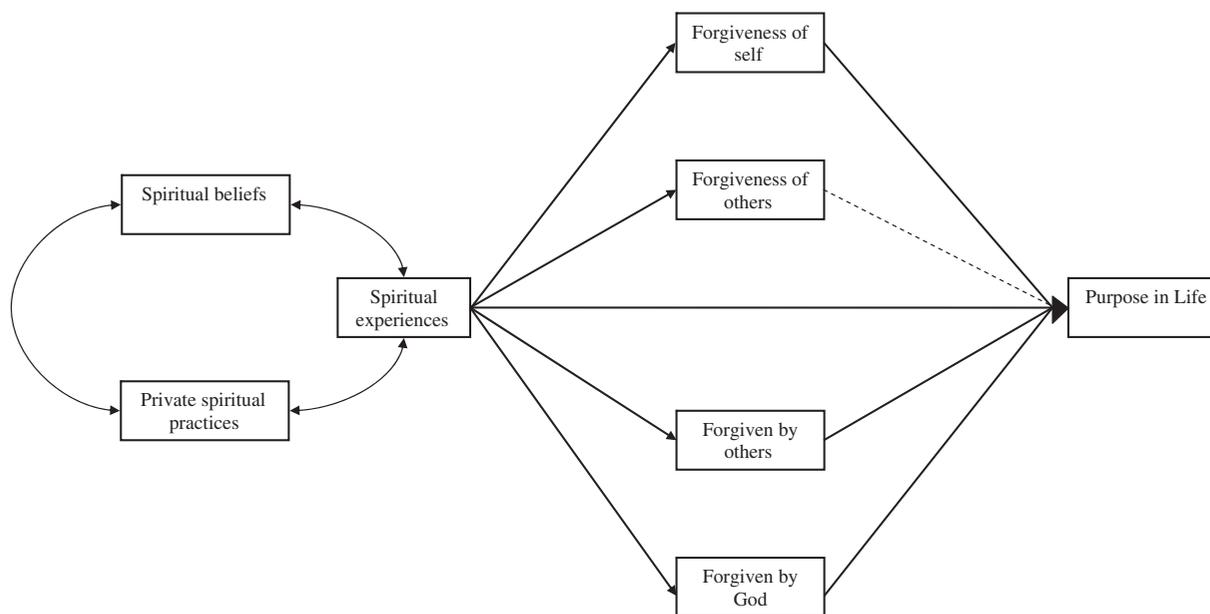


Figure 3. Theoretical relationships between daily spirituality experiences, forgiveness constructs and purpose in life.
 Note: Unbroken lines indicate that the relationship is theorized to be predictive; broken lines indicate a correlational relationship.

with each dimension of spirituality influencing the other (Figure 3).

Though the dimensions of spirituality are highly interrelated, what emerged from the multiple mediation analyses was that spiritual experiences, and not beliefs or practices, predicted forgiveness types and purpose in life. This is consistent with prior research that has found daily spiritual experiences to be associated with recovery (Sterling et al., 2007) and forgiveness in SUD treatments (Webb et al., 2006). The findings indicate that for substance abusers, it is more the lived experience of spirituality (which may include things such as: feeling a longing for God; a deep inner peace; a sense of strength derived from God; or feeling guided by God) that may contribute to forgiveness and not the beliefs or practices *per se* (though, as mentioned, these are likely to play a central role in fostering these daily experiences). Alternatively, it is also possible that higher levels of forgiveness contribute to greater daily spiritual experiences. Further research is needed to clarify the causal direction of the relationships between spirituality and forgiveness. Figure 3 is based on these results and represents both the bidirectional relationship amongst spirituality dimensions and the potential influence of spiritual experiences on forgiveness and purpose in life.

The finding that Twelve Step-based spiritual beliefs only predicted receiving forgiveness from God is also of interest. It has been proposed that the adoption of religion/spirituality by clients in faith-based programs involves a transition from a conceptualization of God as being punishing and unforgiving to a conceptualization of God as loving and forgiving (Neff & MacMaster, 2005). This changing conceptualization of God has been theorized to operate on recovery by promoting meaning in life (Neff & MacMaster, 2005).

The results of our study provide some support for this theory. Although Twelve Step spiritual beliefs themselves did not have a direct or indirect association with purpose in life, they did predict feeling forgiven by God, which in turn predicted greater purpose in life. In other words, spiritual beliefs appear to moderate a positive relationship between receiving forgiveness from God and increased purpose in life. As the Twelve Steps are historically associated with Christianity (White & Kurtz, 2008), and receiving forgiveness from God is central to Christianity (Boice, 1986; Milne, 2009), it is little surprising that participants with higher Twelve Step spiritual beliefs were more likely to perceive God as having forgiven them. What is notable is the demonstrated association between feeling forgiven by God and purpose in life.

Finally, it is important to note that a significant indirect effect was shown for forgiveness of self, receiving forgiveness from others, receiving forgiveness from God, but not for forgiveness of others. Taken with our earlier discussion on resentment and shame, the multiple mediation results further highlight the potential importance that forgiveness of self and receiving forgiveness may play in the treatment of SUDs. The results suggest that clients who are more self-forgiving or feel that they have been forgiven may be less shame-prone and resentful, which promotes a greater purpose and engagement in life.

LIMITATIONS

The most significant limitation of this study relates to its cross-sectional design which means causality cannot be determined between the variables examined. Furthermore, the design of the study did not enable us to examine clients' post-program levels of

substance use. Hence, how and whether spirituality, forgiveness, resentment, and a purposeful engagement in life contribute to abstinence is yet to be determined. There is a need to assess the relationships found using post-discharge measures of abstinence or controlled substance use. A second limitation relates to the small percentage of variance explained by the multiple mediation model (28%), suggesting that other variables may also mediate the relationship between spirituality and a purposeful engagement in life. A third limitation of this study was that the data on religious/spiritual variables was drawn exclusively from faith-based treatment centres and was not corrected for measurement error. Future research on the relationships proposed in this study would benefit from the use of a comparison group from a secular treatment centre.

CONCLUSION

This study tested hypotheses generated from the Twelve Step philosophy of AA and the SFP model of recovery from SUDs. It was hypothesized that forgiveness types would negatively predict resentment. This hypothesis was supported. It was also hypothesized that forgiveness would mediate a relationship between spirituality and purpose and engagement in life. Daily spiritual experiences emerged as a predictor of forgiveness and purpose in life. Furthermore, the relationship between spiritual experiences and purpose in life appeared to solely be attributable to forgiveness of self, receiving forgiveness from others and receiving forgiveness from God; suggesting that shame, self-resentment, and negative self-schema may be of relevance to the treatment of SUDs. Finally, the additional hypothesis, that daily spiritual experiences would be predicted by private spiritual practices and Twelve Step spiritual beliefs was also supported. Together, these results clarify the relationships set out in the SFP model of SUDs. They suggest that, amongst clients of faith-based substance abuse treatment programs, it is the experience of being spiritual, which is derived from spiritual beliefs and practices that predicts self-forgiveness or a perception of being forgiven. In turn, this is associated with lower levels of resentment (and potentially shame) and greater purpose and engagement in life (Figure 3). The results of this study should be considered preliminary and there is a need for further research to replicate and expand on these findings.

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