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Spiritual Change in Drug Treatment: Utility of the Christian Inventory of Spirituality

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Abstract

The current study used data from reliability testing of the Christian Inventory of Spirituality (CIS) to: 1) assess the utility of CIS in detecting differences in level of spirituality in residents of residential Christian faith-based substance abuse programs (RCFBSAPs); 2) test the hypothesis that residents that have been in the program for longer periods of time will have significantly higher levels of spirituality after controlling for relevant demographic characteristics; and 3) test the hypothesis that residents of programs that only use unlicensed staff and place higher importance on spirituality will have significantly higher levels of spirituality. A purposive sample of the cross-sectional data from the reliability testing of the CIS was used (n=253). Analysis supported the hypothesis. Demographic characteristics were not associated with level of spirituality. The CIS proved to be useful in discriminating levels of spirituality. Further research is needed to examine spiritual change using randomized pre-post test designs.

Measuring Spiritual Change in Christian Faith Based Substance Abuse Programs: The Utility of the Christian Inventory of Spirituality

Since Congress passed the charitable choice provision in 1996 that allowed states to contract directly with sectarian organizations for social services, increased attention has been placed on the role played by faith-based programs in the field of chemical dependence. At least 19 states contracted with faith-based organizations to provide some form of welfare-related services¹. Legislation supporting the allocation of funding to these agencies has been controversial in part because there is little rigorous research supporting the effectiveness of these programs. A definition of faith-based programs is not included in the text of all bills and amendments related to charitable choice. The only definition found was in the Texas legislation in which faith-based substance abuse programs are defined as “any program conducted by a religious organization; that is exclusively religious, spiritual, or ecclesiastical in nature, and does not treat minors” (HB 2481 - Legislative Session: 75(R)).

Understanding how faith-based programs work and evaluating their outcomes is essential to making better decisions about how to best support and improve these services. Research in this area has been hampered by the lack of standard definitions of spirituality and faith-based programs, the lack of frameworks that describe faith-based programs, and the difficulty in creating effective measures to evaluate spiritual change in faith-based programs^{2,3}.

Residential Christian Faith-Based Substance Abuse Programs

Residential Christian faith-based substance abuse programs (RCFBSAPs) aim to promote a drug and crime free lifestyle by developing the spirituality of those struggling with AOD problems. The administration, structure, and curriculum of these programs are based on Christian principles and on the belief in God as a vehicle for change. A supportive environment is fostered and includes participation in Bible study, church services, job skills training, spiritual counseling, 24-hour supervision, and a structured daily schedule. Residents are usually from ethnically diverse backgrounds, tend to be poor, marginally employed and housed, and have not been able to benefit from traditional public or private substance abuse treatment programs. Furthermore, these programs provide 24 hour services with no fees and serve a large portion of persons with limited or no-English language abilities. Residents are free to leave anytime though they may stay in these programs for extended periods of time, depending upon their individual needs and desires ⁴.

Neff, Shorkey, & Windsor ⁴ applied Concept Mapping techniques to develop a framework describing RCFBSAPs and their dimensions. Johnsen and colleagues describe Concept Mapping as “a structured method for translating complex qualitative data into a pictorial form that displays the interrelationships among ideas” ⁵. Fifty-one staff and residents of RCFBSAPs participated. Concept Mapping analyses generated ‘maps’ of seven key program dimensions: 1) Spiritual Activities and Values, 2) Supportive Group Environment, 3) Role Modeling and Mentoring, 4) Relationships with Others, 5) Work and Discipline, 6) Provision of Basic Needs and Referral, and 7) Traditional Treatment Program Activities. Comparisons on mean ratings of importance placed on each dimension by the program indicated that programs that only employ non-licensed staff rated Spiritual Activities/Values (3.82 vs. 2.72, $p < .001$) and Relationships with Others (3.59 vs. 3.16, $p < .05$) as significantly more important than programs that used a combination of licensed and non-licensed staff. However, it is not known if a stronger focus on spiritual activities and values, as well as relationships with others, leads to higher levels of spirituality among program participants. Programs that only use unlicensed staff tend to focus daily activities on Bible study, church services, and spiritual counseling while programs that use a combination of licensed and unlicensed staff offer a variety of activities that include job training, participation in AA groups, drug, health and parenting education, as well as individual and group professional counseling.

Relationship between Spirituality and Alcohol and other Drug Abuse

Research has shown that spiritual persons are less likely to abuse alcohol and other drugs (AOD) ⁶⁻¹². Furthermore, in a systematic review of the literature, Koenig & Larson ¹³ found 86 studies that examined the relationship between spirituality and AOD abuse. Of alcohol studies that measured level of religious involvement, 88% found lower alcohol abuse for those with higher religious involvement. Of nine prospective cohort alcohol studies, five found that greater religiosity at baseline was a significant predictor of lower alcohol abuse at follow-up. Studies that examined the relationship between spirituality and drug abuse fit the same patterns as the alcohol studies. However, existing research fails to establish a causal relationship between spirituality and chemical dependency/abuse due to the lack of random, pre-post test study designs conducted in faith-based substance abuse programs. Therefore, it is not known if increased spirituality in fact results in decreased AOD abuse.

Variables Associated with Spirituality

Research provides evidence of a positive association between religion and spirituality with longevity of life ^{14,15}, effective coping with emotional illness ^{16,17}, and a sense of belonging

and hope⁶. Spirituality and religiosity are also associated with less depression¹⁸ and reduced likelihood of suicide^{13,19,20}.

It is known that ethnicity is associated with spiritual commitment and religious preferences²¹. In particular, for African-Americans and Latinos, spirituality has been a source of support, a way to cope with physical and mental problems, and a way to create social networks and interaction with others²²⁻²⁵.

Being female has been shown to be a predictor of the ability to perceive God as loving²⁶. Hendricks, Caldwell, & Katz²⁷ found that increased marital intimacy is related to healthy object relations and increased spiritual well-being. They also found that the spouse's length of time in a 12-step program was associated with both alcoholics' and spouses' reports of marital satisfaction, the spouse's recovery process inventory and the spouse's general level of spirituality. Finally, in a review of 16 articles,²⁸ found that older people may take a growing interest in spirituality which may increase their well-being.

Measurement and Definition of Spirituality in RCFBSAPs

A significant impediment in RCFBSAPs research is the lack of an operational definition of spirituality within these programs. In general the literature tends to describe spirituality as a multidimensional aspect of human beings. These dimensions include behavior, such as rituals; belief in a deity or some transcendental power; and experience, such as miracles, serenity, and "oneness"²⁹.

Shorkey, Windsor, and Spence³⁰ developed the Christian Inventory of Spirituality to measure the spiritual level of residents in RCFBSAPs. The goal of the project was to develop a scale that would compare the interviewee to the ideal spiritual person according to the beliefs espoused by RCFBSAP staff and residents. To operationally define the ideal spiritual person, the researchers conducted focus groups with 75 RCFBSAPs residents to generate statements that describe what a spiritual person thinks, acts, and feels like when they have successfully reached stable recovery from drugs and alcohol. Using Nudist, a software program for qualitative data analysis, the original list of 900 statements was reduced to 480 statements. The research team then identified which of the 480 items portrayed the same conceptual idea. This process reduced the list to 128 statements. To further reduce the list, researchers used a process of cognitive interviews in which participants were asked to identify statements that were confusing, had dual meanings, or contained words that were not widely used. RCFBSAP residents and directors who participated in the cognitive interviews identified 32 statements that met one or more of these criteria, further reducing the list to 96 items. Next, RCFBSAP residents were asked to rate each of the 96 items using a 4 point Likert-scale ranging from 1 (Not at all) to 4 (Completely) to indicate "how well each statement describes your spiritual level at this moment." In total, 954 residents rated the 96 item scale. Exploratory factor analysis was used to further reduce the scale and to identify dimensions of spirituality. The final measure included 48 items and the following dimensions: Relationship with others, 14 items (alpha=.91), reliance on God, 15 items (alpha=.94), spiritual practices, 9 items (alpha=.90), self-appraisal 6 items (alpha=.89), and reliance on self, 4 items (alpha=.78). Table 1 displays the items included in the CIS.

Goal of the Present Study

The goal of this study is to use data from the reliability testing of the CIS³⁰ to: 1) assess the utility of the CIS in detecting differences in level of spirituality in residents of RCFBSAP; 2) test the hypothesis that residents that have been in the program for longer periods of time will have significantly higher levels of spirituality after controlling for relevant demographic

characteristics; and 3) test the hypothesis that residents of programs that only use unlicensed staff and place higher importance on spirituality will have significantly higher levels of spirituality than residents of programs that use a combination of licensed and unlicensed staff and place lower importance on spirituality.

Methods

Recruitment and Data Collection

Twenty-three sites in seven RCFBSAPs in Texas and California agreed to serve as recruiting sites for the study. Some programs provided free services; others used sliding fee scales. Forty-nine percent of the sites included a combination of licensed and unlicensed staff in the program. Since this study compared residents who had been in the program for 2 to 4 weeks, with residents who had been in the program for 6 to 12 months, programs with a maximum length of stay of 30 days were excluded from the analysis. The maximum length of time in the programs included in the study ranged between 3 months to 2 years. Residents were gradually reintegrated in the community after at least 2 months in the programs. A purposive sample was recruited through contacts with administrative and program staff at participating treatment programs. Inclusion criteria were: 1) residing in a RCFBSAP for at least 2 weeks, 2) at least 18 years of age or older; 3) able to read English, and 4) self-reported being Christian.

RCFBSAP staff approached residents to explain the study and solicit participation. Those expressing an interest in participating were then approached by the research team who further explained the study as well as the voluntary nature and confidentiality of responses. Since the Institutional Review Board waived the use of a signed consent form, the invitation to participate was in the form of a cover letter placed on top of test material provided to residents. The cover letter contained all the information typically found in a consent form. Completion of the instrument was used as an indicator of the client's willingness to participate in the study.

Participants

Data was collected from 246 Christian adults who were residing in RCFBSAPs. Of the sample, the majority were White (49%); while 28% were African American and 23% were Mexican or Mexican American. Most were unmarried males (87% and 78% respectively). Over half the sample (67%) had completed high school or a GED. Alcohol, crack cocaine, and marijuana were the most frequently used drugs (61%, 42%, and 41%, respectively). Approximately 56% of participants had been in the program between 2 to 4 weeks and 44% had been in the program between 6 months to 1 year (see Table 2). These participants came from a variety of experiences and sometimes became staff members in their programs. While there were significant differences between participants in programs that used licensed staff and participants in programs that only used unlicensed staff, all participants relied primarily on their spirituality and their family members when dealing with their life challenges. They believed that giving up control over their lives to God was a critical strategy in achieving sobriety as demonstrated by their low scores on the reliance on self dimension of the CIS (see table 3).

Measures and Variables

The 48 self-report items CIS measure was used to measure change in level of spirituality from a Christian perspective over a period of time 30. In this study, alphas for the subscales were calculated as follows: Relationship with others, .94; self-appraisal, .90; spiritual practices, .89; reliance on God, .91; and reliance on self, .78. Validity testing showed significant ($p < .01$) positive correlations between the total CIS score and with the Social

Connectedness Scale ($r=.40$) 31, the Rosenberg Scale of Self Esteem ($r=.63$) 32, the Daily Spiritual Experiences ($r=.69$), Forgiveness ($r=.62$), Spiritual Practices ($r=.62$), and Spiritual Coping ($r=.82$) scales 33; and negative correlations with the Costello Comrey Depression and Anxiety Scales ($r=-.69$ and $-.40$ respectively) 34. Test-retest reliability at one week was .733 ($p<.001$).

The interval dependent variable spiritual level consisted of the total score obtained from the Christian Inventory of Spirituality. Higher scores mean higher levels of spirituality. The dichotomous predictor variables included length of time in the program (“in the program for 2 to 4 weeks”=0 and “in the program between 6 to 12 months”=1) and program type (programs that use a combination of licensed and unlicensed staff =0 and programs that only use unlicensed staff =1).

Independent control variables included respondents' self-reported demographic characteristics. Demographic characteristics included the ordinal variables age (18-21=1; 22-30=2; 31-40=3; 41-50=4; and 51-60=5) and level of education (less than high school=1; completed high school or GED=2; completed college=3; and graduate degree=4). Dichotomous control variables included gender (female=0; male=1), ethnicity (recoded as Anglo=0 and African American or Mexican=1), and marital status (recoded as married=0, unmarried=1).

Data Analysis

Hierarchical multiple regression (HMR) was planned with spiritual level as the criterion and 2 sets of independent variables: 1) program type, marital status, ethnicity, age, level of education, and gender; and 2) length of time participants had been in the program. With a sample of 253, the regression analysis had enough power to detect changes in explained variance (R^2). Models were computed after a thorough evaluation of the assumptions of normality, linearity, homogeneity of variance, independence of errors, and multicollinearity. Caution must be used in the interpretation of this analysis due to the use of ordinal variables and violation of normality for the variable level of education.

In HMR each step is assessed in terms of what it adds to prediction at the point at which it enters the equation, after adjustment for all variables that precede it. Significance of the R^2 statistic was evaluated at each step of the model. Standardized regression coefficients (*Beta*) were used to determine which of the statistically significant predictors had the largest influence on spirituality. Variables were entered at a probability of .05.

Results

Bivariate analysis indicated significant relationships between total CIS score and program type, ethnicity, level of education, and length of time in the program (see Table 4). Marital status, gender, and age were excluded from the HMR analysis due to the lack of a significant bivariate relationship with the CIS total score. None of the relationships between the independent variables indicated a problem with multicollinearity.

Table 5 displays the prediction model for the control variables and the prediction model that included the predictor variable length of time in the program. Significance variance was explained at each step. As predicted, HMR analysis supported the findings that residents of programs that only use unlicensed staff reported higher levels of spirituality (*Beta*=.25, $p<.001$), and that those who had been in the programs between 6 to 12 months had higher levels of spirituality than those in the programs for 2 to 4 weeks (*Beta*=.18, $p<.05$). None of the other independent variables were significant. The predictor variables explained 12% of the

variance in the dependent variable. The CIS detected changes in level of spirituality for individuals residing in RFBSAPs (See Table 6).

A validation analysis was conducted to assess the generalizability of these findings to other samples. A random sample of 25% of the total sample included in this study was held out and HMR analysis was conducted. Results of the validation analysis were consistent with results of the analysis using the full sample, supporting the conclusion that the regression model would predict scores for cases other than those included in the analysis.

Discussion

Results supported our hypothesis that after taking into account marital status, gender, program type (whether or not programs use licensed staff), ethnicity, age, and education level; length of time in the program will be a significant predictor of spirituality. However, program type was the best predictor of spirituality, indicating that residents in programs that use only unlicensed staff have significantly higher levels of spirituality than programs that use licensed and unlicensed staff. This finding was expected since residents in programs that only use unlicensed staff are directed to spend more time working on their spirituality⁴.

Length of time in the program was a significant predictor of spiritual level. Although this may indicate that the longer participants stay in these programs, the more spiritual they become; we must also consider that this study was cross-sectional and did not use a randomized pre-post test design. Thus, there may be alternative explanations for the difference found. It may be that the participants who stayed longer in RCFBSAPs enter the program with higher levels of spirituality and therefore were not comparable to those who did not stay as long. Further research needs to be conducted to test this hypothesis.

Limitations

The study was limited due to the use of a purposive sample, the use of secondary data analysis, violation of assumptions of normality, and the lack of a pre-post test design. Further the independent variables only explained 12% of the variance on the dependent variable. The remainder of the variance in the dependent variable may be explained by other factors associated with spirituality and religiousness such as and sense of belonging⁶. These factors were not included in the analysis because they were not available in the dataset.

None of the participants' demographic characteristics were effective predictors of spirituality. It may be that a group effect is taking place during the program in which the effects of demographic characteristics are reduced. By participating in Bible classes, interacting with the group, attending church services, and learning a different life style, residents in RCFBSAPs may develop a similar view of what it means to be a spiritual person and start applying it into their lives. This hypothesis could not be tested because data were not collected at entry.

Conclusion

The Bush administration has promoted faith-based initiatives by arguing that greater participation by faith-based groups in the provision of social services has the potential to improve service delivery. Since its implementation, the former President's faith-based initiative has been the topic of heated debates in political, legal, social service, policy, and religious circles. Concerns regarding the new legislation include the constitutionality of the law under the first amendment; the difficulty in effectively evaluating implementation; and the fear that looser regulations may result in discrimination and lower standards of client health, safety, and quality of care and lack of medical attention when needed.^{1,35}

Understanding the population served by these programs, as well being able to effectively evaluate outcomes will lead to a better understanding of faith-based programs and possibly the development of standards of practice that can be used by governmental agencies in distributing funds. The findings of this study are a step in the development of research related to RCFBSAPs. Further research is needed to replicate these results, develop knowledge about RCFBSAPs, and identify mechanisms of change in level of spirituality.

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Table1
CIS: In your opinion, how well does each of these statements describe YOU
SPIRITUALLY AT THE PRESENT TIME? (Please check the box that is closest to your
opinion)

	Not at all	Somewhat	Quite a bit	Completely
1. I feel respected by others.				
2. I am a positive person.				
3. I am able to deal with anger.				
4. I am able to see good in others				
5. I work out problems through spiritual means.				
6. I know God forgives me.				
7. I acknowledge my own mistakes.				
8. I try to make sense of the situation and decide what to do without relying on God.				
9. I am honest with others.				
10. I am open to new ideas.				
11. I consider myself a spiritual person.				
12. I feel that life unfolds according to a divine or greater plan.				
13. I work together with God as partners.				
14. I am filled with the Holy Spirit.				
15. I feel deep inner peace and harmony.				
16. I accept other people.				
17. I feel God has forgiven me for the things I have done wrong.				
18. I help others.				
19. I know myself through God.				
20. I desire to be closer to God.				
21. I show respect to others.				
22. I feel that God is a constant part of my life.				
23. I can see life clearly.				
24. I have learned to understand others.				
25. I know God is always there for me.				
26. My spirituality is the most important part of life				
27. I pray in places other than at church.				
28. I show love towards others.				
29. I try to solve problems without God's help.				
30. I have joy.				
31. I work with God to make sense of my life's problems.				
32. I have learned to listen to others.				
33. I treat others in the way God would want others to be treated.				
34. When anxious, I wait for God to make me feel better.				
35. I accept Christ as my savior.				

	Not at all	Somewhat	Quite a bit	Completely
36. I feel better when I pray.				
37. I watch or listen to spiritual programs on TV or radio.				
38. I work with God to decide how to solve my problems.				
39. I say prayers or grace before or after meals.				
40. I read the bible or other spiritual literature.				
41. I seek solutions to my problems in the bible.				
42. I try to make sense of problems on my own.				
43. I act more responsibly.				
44. I care about others.				
45. I let God decide how to solve my problems.				
46. I follow God's plan for my life.				
47. I forgive others.				
48. I feel I can solve problems on my own.				

Table 2

Participants Demographics

	Licensed Staff		Unlicensed Staff		Total Sample	
	Mean (SD)	Percent	Mean (SD)	Percent	Mean (SD)	Percent
Gender						
Male		72%		90%		78%
Female		28%		10%		22%
Level of education						
Less than HS		20%		32%		24%
Completed HS or GED		68%		64%		67%
Completed College		10%		2%		7%
Graduate Degree		2%		1%		2%
Civil status						
Single		57%		54%		56%
Married		10%		18%		13%
Separated		8%		8%		8%
Divorced		24%		17%		21%
Widowed		1%		4%		2%
Age by Group						
18-21		4%		10%		6%
22-30		22%		24%		22%
31-40		30%		30%		30%
41-50		35%		25%		31%
51-60		9%		10%		11%
Ethnicity						
White		65%		17%		49%
Black		16%		35%		23%
Latino		19%		48%		28%
Religion						
Christian		100%		100%		100%
Drug of choice						
Alcohol		60%		62%		61%
Barbiturate		12%		11%		12%
Cocaine		26%		43%		32%
Crack		34%		58%		42%
Hallucinogens		17%		11%		15%
Heroin		16%		29%		20%
Inhalants		5%		8%		6%

	Licensed Staff		Unlicensed Staff		Total Sample	
	Mean (SD)	Percent	Mean (SD)	Percent	Mean (SD)	Percent
Total drugs used						
	Marijuana	40%		44%		41%
	Opiates	14%		4%		10%
	Speed	49%		18%		38%
		2.7(2.3)	2.8(2.0)		2.8(2.2)	
Self-reported level of spirituality	Not spiritual at all	17%		17%		1%
	Not very spiritual	36%		39%		5%
	Somewhat spiritual	41%		38%		39%
	Very spiritual	4%		6%		37%
	Extremely spiritual	2%		0%		18%
Length of time in the program	Between 2 to 4 weeks	54%		61%		56%
	Between 6 to 12 months	46%		39%		44%
Program type	Licensed staff	100%		0%		67%
	Unlicensed staff	0%		100%		33%

Table 3

Normative data according to program type

Domain	Demographic	Mean(SD)	Range	F/t	Sig level
Relationship with Others	Program Type	---	14-56	-5.85	.000
N					
689	Licensed	43.4(6.6)	20-56		
285	Unlicensed	46.0(6.9)	18-56		
Relationship with God					
N		---	15-60	-13.01	.000
689	Licensed	42.7(9.6)	15-60		
285	Unlicensed	50.2(7.6)	20-60		
Spiritual Practices					
N		---	1-36	-9.92	.000
689	Licensed	32.0(4.7)	9-36		
285	Unlicensed	34.4(2.5)	20-36		
Self-Appraisal					
N		---	6-24	-9.31	.000
689	Licensed	18.4(3.8)	6-24		
285	Unlicensed	20.5(3.1)	8-24		
Self-Reliance					
N	---	---	4-16	8.42	.000
689	Licensed	8.4(2.7)	4-16		
285	Unlicensed	6.7(2.7)	4-16		
CIS Total Score					
N	---	---	48-192	-9.99	.000
689	Licensed	144.9(20.7)	87-192		
285	Unlicensed	157.8(17.4)	76-192		

Table 4
Scale descriptive data and bivariate correlations with the CIS

	<i>Mean (SD)</i>	<i>r with CIS total score</i>	<i>P value</i>
CIS	147.9(22.1)		
Marital Status		.076	.12
Gender		.002	.49
Program Type		.306	.00**
Ethnicity		.261	.00**
Age in Group		-.012	.42
Education level		-.104	.05*
Length of Time in the Program		.148	.01*

Table 5
Hierarchical multiple regression model with CIS total score as the criterion

<i>Independent Variables</i>	<i>Model I</i>			<i>Model II</i>		
	B(SE)	Beta	Sig.	B(SE)	Beta	Sig.
Program Type	11.8(3.1)	.253	.000**	12.83(3.1)	.276	.000**
Ethnicity	2.84(1.8)	.110	.112	1.96(1.8)	.076	.273
Education Level	-1.51(2.6)	-.042	.504	-2.23(2.2)	-.062	.323
Length of Time in the Program	---	---	---	2.45(.9)	.166	.007*
F	9.768(.245)			9.354(4.245)		
Adjusted R ²	.096			.121		

Table 6
CIS mean scores across groups (scores can range from 60 to 180)

<i>Groups</i>	<i>CIS mean score and standard deviation</i>
Residents in the program between 2 to 4 weeks	144.95(1.89)
Resident in the program between 6 to 12 months	151.69(2.00)
Residents in programs using licensed and unlicensed staff	143.17(1.74)
Residents in programs using only unlicensed staff	157.41(1.93)