This pdf file contains the following three peer-reviewed articles:

- Schaler, J.A. (1997). Addiction beliefs of treatment providers: Factors explaining variance. *Addiction Research*, 4, 367-384.

- Schaler, J.A. (1996). Spiritual thinking in addiction treatment providers. *The Spiritual Belief Scale. Alcoholism Treatment Quarterly*, 14, 7-33.

- Schaler, J.A. (1995). The addiction belief scale. *International Journal of the Addictions*, 30, 117-134.

Addiction Research 1997, Vol. 4, No. 4, pp. 367–384
Reprints available directly from the publisher
Photocopying permitted by license only

ADDICTION BELIEFS OF TREATMENT PROVIDERS: FACTORS EXPLAINING VARIANCE

JEFFREY A. SCHALER

Department of Human Development/Institute for Child Study, University of Maryland College Park

Factors explaining variance in beliefs among addiction-treatment providers regarding the etiology of addiction were investigated (n = 295). An 18-item Addiction Belief Scale (ABS) assessed strength of belief in the disease versus the free-will models of addiction (α= .91). Scores on an eight-item Spiritual Belief Scale assessing spiritual thinking based on Alcoholics Anonymous (AA) philosophy (α = .92), the Multidimensional Health Locus of Control scales, and demographic questions were used to predict scores on the ABS. These variables accounted for 62 percent of the variance in addiction beliefs. Spiritual thinking explained 41 percent of the variance. Spiritual thinking, professional-group affiliation, gender, attendance in AA, certification status, and alcohol/drug consumption are each significant in explaining variance in addiction beliefs.

Keywords: Disease-model controversy, spiritual, beliefs, gender, certification, Alcoholics Anonymous

INTRODUCTION

While the potential risks of mood-altering-drug use to physical health are relatively undisputed, heated controversy exists within the alcohol/drug field concerning the role of cognitive, behavioral, and physiological processes in motivating or governing addiction (Szasz, 1989). The debate is known as "the disease-model controversy" (Alexander, 1987; Cahalan, 1988; Erickson & Alexander, 1989; Fillmore & Sigvardsson, 1988; Fingarette, 1988; Peele, 1992; Room, 1983; Schaler, 1991; Roizen, 1987; Szasz, 1972; Vatz & Weinberg, 1990). The disparity in scientific opinion regarding addiction, particularly with regard to the issue of personal control, formed the basis for this inquiry into beliefs of addiction-treatment providers.

Multiple and diverse models have been used to explain addiction. They are classified into two groups for the purposes of this study: The model that views addiction as a volitional event is termed the "free-will model." Here behavior is considered the function of moral agency and motivation. The model that views addiction as an involuntary event, characterized by loss of control, is termed the "disease model." Here behavior is consid-

Address for correspondence: Dr. Jeffrey A. Schaler, 14920 Wellwood Road, Silver Spring, Maryland 20905-5765, U.S.A. Internet: Jschale@American.edu

ered to be caused and determined by forces external to the self. (While behaviorists may not identify themselves as disease modelists, insofar as they are deterministic in their explanations, they are inclined to explain addiction as an involuntary process, i.e., behavior is not the function of moral agency, rather it is *caused*.)

The purpose of this study was to discover some of the factors that may account for variance in beliefs regarding the etiology of addiction among treatment providers, i.e., the extent to which they believe addiction is a disease, devoid of volitional components and dependent primarily on physiological factors or strictly a behavioral (willful) phenomenon correlated with expectancy and other psychological and environmental factors.

Alcoholics Anonymous (AA) has played an integral role in the development of the disease model of addiction (Levine, 1978, 1984). Many addiction-treatment providers have had experience in AA and related "12-step" programs. AA stresses the importance of a spiritual-conversion experience in controlling alcohol intake and advocates a locus-of-control orientation (Alcoholics Anonymous World Services, 1976; Antze, 1987; Kurtz, 1988; and Kurtz & Ketcham, 1992).

Thus, the extent to which spiritual thinking may explain variance in beliefs is of particular interest here. For the purposes of this study, spiritual thinking is defined as belief in a metaphysical power that can influence personal experience. Moreover, since causal factors are a component of various addiction paradigms, the locus-of-control orientation of providers may also play a key role.

Three questions further specifying these factors guided the inquiry: (a) Do spiritual beliefs of treatment providers explain variance in beliefs regarding the etiology of addiction? (b) Does the health locus-of-control orientation of treatment providers explain such variance? (c) Do any of the following demographic characteristics of addiction-treatment providers account for such variance: age, gender, race, educational status, marital status, religious affiliation, certification-as-treatment-provider status, alcoholic/addict-in-recovery status, past and present experience in 12-step and/or other treatment programs (plus length of time in those programs) current drinking or drug-taking status, and professional-group affiliation?

The Importance of Studying the Beliefs of Addiction-Treatment Providers

Reviewing a psychoanalytic critique of substance-abuse-treatment approaches and the cultural beliefs that sustain them, a reviewer for *The New England Journal of Medicine* seemed to agree that addiction-treatment providers who do not engage in

> the kind of personal self-examination through psychotherapy or psychoanalysis that is mandatory in psychoanalytic training and is undertaken by other serious therapists on their own initiative . . . are therefore in a self-interested position to maintain a belief in a psychologically unsophisticated model of disease (Dodes, 1992, p. 1369).

Beliefs of addiction-treatment providers could affect their clients in adverse ways. Their beliefs may stem from their own personal experience of recovery more than from scientific findings. The provider might be biased toward one method of treatment, the one that worked for the provider. Advice based on personal experience may conflict with empirical findings. Providers' beliefs regarding powerlessness, as learned in 12-step-type programs

emphasizing the disease model of addiction, may contribute to decreased feelings of self-efficacy in clients (Bandura, 1977, 1986; Wallston, 1992). An editorial in the *British Journal of Addiction* addresses some of these concerns (Bergmakr & Oscarsson, 1991):

> If we as researchers can make plausible that the therapeutically active features of a treatment program are not the ones the practitioners themselves believe in, and if this weakens the therapeutic effect of these features, should we still do this in the name of science and progress? . . . An example of such a 'hidden' therapeutic feature could be the **belief** [emphasis in original] among personnel and clients that alcoholism is a disease involving 'loss of' or 'impaired control' over the intake of alcohol (and this irrespective of the actual existence of such a phenomenon). (p. 141)

Addiction-treatment providers are an appropriate population to study because they are considered experts on addiction and their opinion is often sought by policy-makers in the field of drug addiction. Moreover, experts in the field have decried the lack of research attention given to those who allegedly know addicts best, namely, addiction-treatment providers (Cahalan, 1979).

For example, responding to critics of the disease model of alcoholism, Vaillant (1990) wrote:

> [T]he philosopher Herbert Fingarette, the psychoanalyst Thomas Szasz, the sociologist and theoretician Robin Room, and provocative, thoughtful psychologists like Stanton Peele and Nicholas Heather have every qualification but one for explaining why alcoholism is not a disease—they have never worked in an alcoholic clinic. **Why . . . do experienced alcohol workers and recovering alcoholics . . . accept the view that alcoholism is a disease**? [emphasis added] Why is it mainly less competent people, the active alcoholics, who agree with Professor Fingarette that they are just 'heavy drinkers'? (p. 4)

METHOD

The research questions were investigated through a survey sent to addiction-treatment providers. A pilot version of the survey was administered to providers at two clinics in the Washington, D.C. metropolitan area to assess reliability of the various instruments as well as to incorporate comments regarding the design and structure of survey items. Formal reliability analyses were conducted on the pilot scale results. After changes were made in the construction and selection of items, a total of 511 seven-page surveys with cover letter were mailed to addiction-treatment providers in the U.S., Canada, and Australia.

Two hundred instruments were distributed to a random sample of members of the National Association of Alcoholism and Drug Abuse Counselors (NAADAC), the largest association of alcoholism counselors in the United States. Official statements by this organization have described addiction as a treatable disease. The organization is also actively involved in certifying alcohol and drug counselors.

One hundred forty-four instruments were mailed to the complete list of treatment providers serving as supervisors for Rational Recovery Systems (RRS) groups, a national, secular-based alternative to AA groups that is currently undergoing rapid growth and expansion throughout the U.S. Official statements from this organization emphasize abstinence as the most effective way of controlling addiction. It appears to take no official position on the disease-model controversy, yet is often critical of AA on anti-religious grounds.

One hundred sixty-seven instruments were mailed to addiction-treatment providers who are members of the Society of Psychologists in Addictive Behaviors (SPAB), a national organization in the U.S. The secretary/treasurer of SPAB handpicked these members on the basis of their having listed themselves as treatment providers. The organization was used at the suggestion of Dr. G. Alan Marlatt, a widely recognized expert in the field of addiction. SPAB's orientation to addiction was unknown. The organization has now become Division 50 of the American Psychological Association. These three organizations were chosen to represent a diversity of beliefs. While other organizations of treatment providers exist, these groups were selected on the basis of suspected diversity and accessibility.

Each participant received a letter introducing the study, the instrument and instructions. A self-addressed, stamped envelope was included, along with a request that participants return the instrument as soon as possible. Confidentiality was assured in the cover letter. Each survey had a handwritten number in the upper-right corner of the first page, which corresponded to a number on the mailing list of participants. As surveys were returned, this number was cut off and discarded, and the name of the participant was crossed off the mailing list. Those names not crossed off after two weeks were sent reminder postcards.

Completed and returned surveys totaled 327 constituting an initial 64 percent return rate. Of these, 32 respondents indicated they were not addiction-treatment providers; therefore, 295 providers established the primary sample studied, 58 percent of those sent a survey ($n = 295$). One hundred four surveys were returned from NAADAC (52 percent of those mailed to this group); ninety-eight surveys were returned from SPAB (59 percent of those mailed); and ninety-one surveys were returned from RRS (63 percent of those mailed). Two respondents had cut off the group-identifying number, making it impossible to determine which group they belonged to.

DESCRIPTION OF SCALES USED IN THE SURVEY

The Addiction Belief Scale

This instrument was composed of 18 statements representing beliefs regarding the etiology of drug addiction and addicts' ability to control their addiction (Table 1). These items served as the criterion. They represent the two perspectives on the etiology of addiction, i.e., that it is primarily a volitional behavior that people develop as a way of coping with their life or that it is a primary and uncontrollable disease from which other problems in living stem. The statements representing the two perspectives are marked by brackets in Table 1.

The 18 items were presented in random order to avoid a patterned response. Subjects were asked to mark the extent to which they agreed or disagreed with each statement along a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The higher the degree of belief in the disease model of addiction, the higher their total score.

The highest possible score for each item was five, and for all 18 items, 90. The conceptual median score was 45. The strongest possible belief in the free-will model of addiction is represented by a score of five for each of the nine free-will items and zero for each of the nine disease-model items (or a total of 45).

Table 1 The Addiction Belief Scale.

A1.	Most addicts don't know they have a problem and must be forced to recognize they are addicts. [Disease model]
A2.	Addicts cannot control themselves when they drink or take drugs. [Disease model]
A3.	The only solution to drug addiction and/or alcoholism is treatment. [Disease model]
A4.	The best way to overcome addiction is by relying on your own willpower. [Free-will model]
A5.	Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem. [Disease model]
A6.	People can stop relying on drugs or alcohol as they develop new ways to deal with life. [Free-will model]
A7.	Addiction has more to do with the environments people live in than the drugs they are addicted to. [Free-will model]
A8.	People often outgrow drug and alcohol addiction. [Free-will model]
A9.	The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it. [Disease model]
A10.	Abstinence is the only way to control alcoholism/drug addiction. [Disease model]
A11.	Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not. [Disease model]
A12.	Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use. [Free-will model]
A13.	People become addicted to drugs/alcohol when life is going badly for them. [Free-will model]
A14.	The fact that alcoholism runs in families means that it is a genetic disease. [Disease model]
A15.	You have to rely on yourself to overcome an addiction such as alcoholism. [Free-will model]
A16.	Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity. [Free-will model]
A17.	People who are drug addicted can never outgrow addiction and are always in danger of relapsing. [Disease model]
A18.	Drug addiction is a way of life people rely on to cope with the world. [Free-will model]

Note. $\alpha = .91$ (standardized item $\alpha = .91$, $n = 266$), mean = 54.12 ($SD = 13.55$, $n = 295$). Highest possible score is 90. The higher the score, the stronger the belief in the disease model of addiction. The lower the score, the stronger the belief in the free-will model of addiction.

The ABS was examined for face validity by Drs. Stanton Peele and Kaye Middleton, scholars who have written extensively on the disease-model controversy and are widely recognized experts in the field of alcohol and drug research. Their suggestions were incorporated in the development of the ABS inventory.

Cronbach's alpha was calculated for the ABS and $\alpha = .91$ (standardized item $\alpha = .91$, $n = 266$). A factor analysis of the ABS with reliabilities for sub-scales is presented by Schaler (1995). Despite the apparent bi-dimensional content, the scale in fact has a three-factor structure. Three factors were loaded using varimax rotation and were labeled "power," "dichotomous thinking," and "addiction as a way of coping with life" dimensions. Cronbach's alpha for each of the three sub-scales was .91 ($n = 274$), .83 ($n = 285$), and .47 ($n = 286$) respectively. Disease-model items and free-will items combined on the first two factors.

The Spiritual Belief Scale

The second survey instrument, the Spiritual Belief Scale (Table 2), included eight items measuring spiritual thinking (Schaler, in press). These items were adapted from AA literature. Each contains a reference to God or "spiritual health." The items are grouped according to the analysis of four spiritual characteristics of AA developed by Ernest Kurtz,

Table 2 The Spiritual Belief Scale (SBS).

S1.	I feel that in many ways turning my life over to God has actually set me free.
S2.	I know that all the best things in my life have come to me through God.
S3.	I believe I am blessed by God with many gifts I do not deserve.
S4.	I feel it is important to thank God when I manage to do the right thing.
S5.	It's only when I stop trying to play God that I can begin to learn what God wants for me.
S6.	I know I am able to meet life's challenges only with God's help.
S7.	I know that forgiving those who have hurt me is important for my spiritual health.
S8.	I believe there are many ways to know God and that my way is not the only way.

Note. $\alpha = .92$ (standardized item $\alpha = .91$, $n = 280$) mean = 24.27, ($SD = 8.55$, $n = 294$). Highest possible score is 40. The higher the score, the stronger the belief in a metaphysical power that can influence personal experience, i.e., spiritual thinking.

a well-known scholar of AA (Kurtz, 1988; O'Connell, 1991; Kurtz & Ketcham, 1992). The SBS was examined by Dr. Kurtz and anthropologist Dr. Paul Antze, of York University, Toronto, for face validity (Antze, 1987). Their suggestions were incorporated in the development of the SBS inventory.

Subjects were asked to mark the extent to which they agreed or disagreed with the statements along a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The SBS was scored in the direction of high spiritual belief, i.e., the higher the score, the more the subject tends to engage in spiritual thinking along the dimensions described.

The wording of some of the items may appear to leave them open to contradictory interpretations. For example, item S3 states that "I believe I am blessed by God with many gifts I do not deserve." While disagreement with the statement might mean that a) "I don't believe in God" or b) "God hasn't given me too many gifts of late" or even c) "I deserve all the things I've gotten from God", it is unlikely that a person who believes in God would also believe that God has not bestowed gifts of late, for the belief in God is likely to be based on a sense of gifts from God. Moreover, "deserved" gifts from God contradicts the sense of humility characterizing AA spirituality.

Cronbach's alpha was calculated for the SBS and $\alpha = .92$ (standardized item $\alpha = .91$, $n = 280$). A factor analysis of the SBS with reliabilities for sub-scales is presented by Schaler (in press). Factor analysis of the SBS revealed two dimensions to spiritual thinking based on AA philosophy: One is characterized by a "release-gratitude-humility" dimension ($\alpha = .95$, $n = 281$) and the other is characterized by a "tolerance" dimension ($\alpha = .53$, $n = 290$).

The Multidimensional Health Locus of Control Scales

The third part of the survey was the Multidimensional Health Locus of Control scales (MHLC) developed by Wallston *et al.* (1978), which was used to assess health locus-of-control orientation (Appendix A). For this study, items were selected from Form A and Form B based on previously established alpha reliabilities for each dimension, and alpha reliability exhibited through the pilot study mentioned earlier.

Subjects were asked to mark the extent to which they agreed or disagreed with each MHLC scale statement along a five-point Likert scale ranging from "strongly disagree" to "strongly agree." (The original Wallston study used a six-point Likert scale. A five-point

Likert scale was used in the present study to maintain uniformity throughout the survey.) Each dimension of the MHLC was scored independently.

The reliability findings for this study were as follows: Cronbach's alpha was calculated for the Internal Health Locus of Control (IHLC) scale and $\alpha = .64$ (standardized item $\alpha = .66$, $n = 284$). The maximum possible score on the IHLC scale was 30. The higher the score, the more respondents believed their behavior alone determines their state of health or illness.

Cronbach's alpha was calculated for the Powerful Others Health Locus of Control (PHLC) scale and $\alpha = .57$ (standardized item $\alpha = .58$, $n = 284$). The maximum possible score on the PHLC scale was 30. The higher the score, the more the respondent believed that control over health or illness is external to self and lies in the hands of powerful others, e.g., medical doctors.

Cronbach's alpha was calculated for the Chance Health Locus of Control (CHLC) scale and $\alpha = .63$ (standardized item $\alpha = .63$, $n = 282$). The maximum possible score on the CHLC scale was 30. The higher the score, the more the respondent believed that control over health or illness is a result of chance, fate, or luck.

Demographic Questions

The fourth survey instrument requested demographic information from the respondents. Subjects were asked to indicate their age at last birthday; gender; race/ethnic background; marital status; education status (highest); religious affiliation; whether they were an addiction-treatment provider; whether they were certified as an alcohol or addiction counselor; whether they considered themselves to be an alcoholic or addict in recovery; whether they currently attended AA or any other 12-step program; how long they had been in AA or any other 12-step program; whether they had attended AA or any other 12-step program in the past; whether they were currently abstinent from alcohol and/or mood-altering drugs; and the number of drinks/drugs they took per week. Appendix B summarizes this information on the sample. The mean age of respondents at last birthday was 44.04 years ($SD = 9.68$, $n = 293$). The mean number of years respondents had spent in AA was 5.04 years ($SD = 6.89$, $n = 224$). One hundred seventeen respondents indicated they had spent no time in AA. The mean number of drugs and/or drinks consumed per week was 1.82 ($SD = 3.21$, $n = 130$).

Two hundred eight respondents were Caucasian (94.9 percent), seven were African-American (2.4 percent), four were Hispanic (one percent), three were American Indian (one percent) and one was Asian (.3 percent). Forty one respondents were never married (13.9 percent), 187 were married (63.4 percent), six were widowed (two percent), and 59 were separated/divorced (20 percent). Twenty eight respondents indicated they had "some college" (nine and a half percent), 39 had bachelor degrees (13.2 percent), 218 had graduate degrees (73.9 percent), six had medical degrees (two percent), and three indicated they had "other" educational backgrounds (one percent). Eighty one respondents indicated that they were Protestants (27.5 percent), 46 were Catholic (15.6 percent), 42 were Jewish (14.2 percent), 22 were atheist (seven and a half percent), 30 were agnostic (10.2 percent), and 64 indicated "other" regarding religious background (21.7 percent). One hundred fifty three respondents indicated they were certified as treatment providers (51.9 percent) and

142 indicated they were not (48.1 percent). Sample characteristics by treatment-provider group are listed in Appendix B.

Beliefs on Addiction Recovery Without Treatment

The fifth part of the survey asked respondents to indicate what percentage of addicts they believed recovered from their addiction without any form of medical or 12-step-type treatment. Percentages from 0 to 100 were listed in intervals of ten, and subjects were asked to circle the appropriate figure. This item served as a further validity check for the ABS. Scores for these two variables should correlate negatively, i.e., respondents who believed strongly in the disease model of addiction (high scores on the ABS) should believe that a low percentage of drug addicts get over their addiction without treatment as compared with those who believed strongly in the free-will model.

Comments

The last item on the survey welcomed comments: "You are welcome to write any comments on this instrument or the topics addressed in the space below."

Treatment-Provider Groups

Treatment-provider groups included 98 (33.2%) from SPAB, 63 (64%) males and 35 (36%) females; 91 (30.8%) from RRS, 69 (76%) males and 22 (24%) females; and 104 (35.3%) from NAADAC, 53 (51%) males and 51 (49%) females. Appendix B reflects the sample characteristics by treatment-provider group. The three groups varied significantly by gender ($X^2 = 12.97$, $df = 2$, $p < .001$).

RESULTS

The Statistical Package for the Social Sciences (SPSS-X) program on an IBM mainframe computer at the University of Maryland Computer Science Center was used to calculate the results for this study. Appendix C lists the mean scores for the ABS, SBS, and MHLC scales.

There were ninety-one missing cases. Missing cases by variables included the following: SBS = one; IHLC = one; age = two; educational status = one; recovery status = two; time spent in AA = 71; in AA in the past = nine; abstinence status = two; drug frequency = two. Since the total number of cases decreased by the number of missing cases in the regression analyses, and length of time spent in AA resulted in the highest number of missing cases (71), length of time in AA was dropped as an independent variable from the regression analyses. The residuals were plot-graphed and found to be normally distributed (minimum = –28.1613, maximum = 33.2242, mean = –.1132, $SD = 10.3920$, $n = 294$).

For the question asking about treatment providers' beliefs regarding the percentage of addicts who recover without treatment, the mean percentage was 25.07 ($SD = 24.42$, $n = 293$) (with a range from zero to 100 percent). Those beliefs were negatively correlated with scores on the ABS ($r = -.67$, $p = .01$, two-tailed), thus strengthening the validity of the ABS.

Findings Related to the Research Questions

Table 3 lists the findings relevant to each of the research questions. To answer the question, Do spiritual beliefs (SBS) of treatment providers explain variance in beliefs regarding the etiology of addiction among treatment providers?, the correlation (r) between scores on the SBS and ABS was calculated.

Table 3 Factors Explaining Variation in Addiction Beliefs

Do spiritual beliefs (SBS) of treatment providers explain variance in beliefs regarding the etiology of addiction among treatment providers?

Variable	*r*	r^2	*p value*	*Partial R*[a]	*Beta*[a]	*Incremental* R^{2a} *increase*	*p*[a] *value for test of increment*
SBS	.64	.41	.0000	.27	.27	.0290	.0000

Does the health locus-of-control orientation (MHLC) of treatment providers explain variation in beliefs regarding the etiology of addiction?

[Cumulative model]

Order	*Variable*	R^2	*Incremental* R^2 *increase*	*F*	*df*	*p*[a] *value for test of increment*
Step One	SBS	.41				
Step Two	MHLC	.42	.01	1.97	3,273	.1182

[Partialing model]

Variable	*r*	*p value*	*Partial R*[a]	*Beta*[a]	*Incremental* R^{2a} *increase*	*p*[a] *value for test of increment*
PHLC	.18	.0000	.12	.08	.0056	.0521
IHLC	−.13	.0200	−.01	−.01	.0001	.8530
CHLC	.09	.1100	.08	.06	.0025	.1922

Does the age; gender, race/ethnicity;[b] educational status, marital status, religious affiliation, certification-as-treatment-provider status, alcoholic/addict in recovery status, past and present experience in 12-step and/or other treatment programs, as well as their current drinking or drug-taking status, i.e., whether they are abstinent or not, and their professional-group affiliation explain variation in beliefs regarding the etiology of addiction?

[Cumulative model]

Order	*Variable*	R^2	*Incremental* R^2 *increase*	*F*	*df*	*p*[a] *value for test of increment*
Step One	SBS	.41				
Step Two	MHLC	.42	.01	1.97	3,273	.1182
Step Three	(All at step three)[c,d]	.62	.20	7.48	18,255	.0000

[Partialing model]

Variable	*r*	*p value*	*Partial R*[a]	*Beta*[a]	*Incremental* R^{2a} *increase*	*p*[a] *value for test of increment*
Group[c,d]					.0580	
SPAB			.03	.02		.0001
NAADAC			.29	.27		.0000
Gender	.31	<.0001	.25	.18	.0256	.0000
Drug freq.	−.35	<.0001	−.12	−.10	.0059	.0479

(continued)

(**Table 3** continued)

Variable	*r*	*p value*	*Partial R*[a]	*Beta*[a]	*Incremental R*[2a] *increase*	*p*[a] *value for test of increment*
Religious Affiliation[c,e]				.009		
Protestant			−.080	−.050		.5114
Catholic			.003	.002		.9031
Jewish			.150	.100		.0611
Agnostic			−.040	−.030		.6384
Marital Status[c,f]					.0037	
Married			.060	.050		.1925
Widowed			.050	.040		.2476
Sep/Div.			−.030	−.020		.5164
AA now	−.55	<.0001	−.180	−.180	.0121	.0046
AA past	−.28	<.0001	.030	.020	.0004	.6084
Certification	−.26	<.0001	−.130	−.100	.0066	.0360
Education	−.26	<.0001	.050	.040	.0008	.4550
Abstinence	−.37	<.0001	−.020	−.020	.0004	.7649
Rec. addict	−.40	<.0001	.010	.010	.0000	.8629
Age	<−.01	.9900	.090	.060	.0031	.1514

Note: [a]After controlling for all other variables at Step 1 of the regression equation.
[b]Significance of F for race/ethnicity = .10 so this variable was not entered into the regression equation.
[c]Series of dichotomies created when the nominal variables were dummy coded.
[d]Compared to members of Rational Recovery Systems, $F = 33.81$, $df = 1,190$, $p < .01$.
[e]Compared to those respondents who identified themselves as atheists, $F = 2.64$, $df = 1,190$, $p > .05$.
[f]Compared to those respondents who identified themselves as unmarried, $F = 3.27$, $df = 1,190$, $p > .05$.

Next, all of the variables were entered into the regression equation at step one, with the exception of scores for the SBS variable. The incremental R^2 and beta for this variable entered at step two were calculated. As Table 3 shows, SBS explains 41 percent of the variance in ABS and gives an incremental increase in R^2 of three percent, over and above all other variables, a finding that is significant at the $p < .0001$ level.

To assess the ability of MHLC scores to explain variance in the ABS over and above all other variables, all of the variables were entered into the regression equation at step one, with the exception of scores for the three MHLC scales, which were then entered at step two. The incremental contribution for MHLC scale scores was then calculated in this manner. As Table 3 shows, SBS scores and MHLC scale scores together explain 42 percent of variance in the ABS. The incremental increase in R^2 is one percent after SBS scores were entered into the equation. The additional increment for MHLC scores is not significant. The incremental increase for each of the MHLC scales after partialling is not significant. Note that Cronbach's alpha for the Powerful Others Health Locus of Control scale is low, ($\alpha = .57$).

To determine whether various demographic characteristics of providers explain variation in beliefs regarding the etiology of addiction, the variables were entered into the regression equation at step three, with scores of SBS and scores for the MHLC scales entered into the equation at steps one and two (see Table 3). All variables together explained 62 percent of the variance in ABS scores. The demographic variables explained 20 percent of the variance in addiction beliefs over and above the SBS and MHLC scale scores. This incremental increase in R^2 for the demographic variables to explain scores in the ABS is significant at the $p < .0001$ level ($F = 7.48$, $df = 18, 255$).

To explore the ability of the demographic variables to explain variance in the ABS over and above all other variables, each was entered into the regression equation at step two, with all other variables entered at step one, except the variable being tested. The incremental R^2 and beta for each at step two were calculated. Table 3 shows the incremental R^2 for each of these variables, the significance of the increment, and the beta statistic for each variable, with ABS scores as the criterion. Five of these demographic variable were statistically significant: Professional-group membership of treatment providers, gender, attendance in AA now, certification status as an addiction-treatment provider, and the number of alcoholic drinks and/or mood-altering drugs consumed per week.

The professional-group affiliation variable was dummy coded and when the status for each of the three groups was entered into the regression equation they together explained a six percent increase in addiction beliefs, over and above all the other variables entered at step one. Members of NAADAC scored highest on the ABS (mean = 64.97), followed by those from SPAB (mean = 52.88). Members of RRS scored lowest on the ABS (mean = 42.89).

Female gender is positively associated with ABS score ($r = .31$, $p = .01$, R^2 increment = .03). Mean score on the ABS for females equaled 59.60 and for males 50.91. Females tend to believe in the disease model. Males tend to believe in the free-will model.

Being in AA now is positively associated with ABS score ($r = -.55$, $p = -.55$, R^2 increment = .01). The mean score on the ABS for those in AA now was 64.43 and for those not in AA now 48.75. Those in AA now tend to believe in the disease model. Those not in AA now tend to believe in the free-will model.

Being certified as an addiction-treatment provider is positively associated with ABS score ($r = -.26$, $p = .01$, R^2 increment = .01). Mean score on the ABS for those certified was 57.44 and for those not certified 50.54. Addiction-treatment providers who are certified tend to believe in the disease model. Those not certified tend to believe in the free-will model.

Drug use frequency is negatively associated with ABS score ($r = .31$, $p = .01$, R^2 increment = >.01). The fewer drugs they consume, the more likely the treatment providers believe in the disease model. Those consuming more drugs tend to believe in the free-will model.

None of the other variables contributed a significant amount of increase in R^2 at $p = .05$.

The findings in Table 3 show that six factors explain variance in beliefs regarding addiction: Scores on the Spiritual Belief Scale, professional-group membership of treatment providers, gender, attendance in AA now, certification status as an addiction-treatment provider, and the number of alcoholic drinks and/or mood-altering drugs consumed per week.

DISCUSSION

The controversy over the disease model of addiction prompted an investigation of the addiction beliefs of treatment providers and the factors that might explain variance in these beliefs. A survey using several instruments explored the two models that clinicians adhere

to insofar as they can be dichotomized into the disease and free-will models of addiction. Responses to the survey revealed several factors that explain variance in, though do not necessarily influence, belief in one of the two models.

The comments from respondents suggested that researcher bias was well-protected against. Respondents who believed in the disease model of addiction accused the investigator of bias in favor of the free-will model. Those critical of the disease model accused the investigator of bias in favor of the disease model. These comments are listed in their entirety in a doctoral dissertation by Schaler (1992).

Addiction-treatment providers who believe in the disease model of addiction tend to believe in a metaphysical power that can influence personal experience, as operationally defined by this study. They are also more likely to be female, attend AA, be certified as addiction-treatment providers, and drink less alcohol and/or ingest fewer mood-altering drugs per week than those treatment providers who believe in the free-will model of addiction. Further, they are more likely to be members of NAADAC and SPAB (now Division 50 of the American Psychological Association).

Treatment providers who believe in the free-will model of addiction are more likely to not believe in a metaphysical power that can influence personal experience, as operationally defined by this study. They are not usually in AA, are not generally certified as addiction-treatment providers, and tend to be male. They are also more likely to be members of RRS.

Health-locus-of-control orientation as measured by the MHLC scales appears unrelated to addiction beliefs among treatment providers, however, the reliabilities for these scales are low.

Concern about the role of spiritual thinking and its place in treatment for addiction has spurned the creation and development of new approaches in the self-help movement. Rational Recovery supervisors were selected as part of the sample for this study because the philosophy of that program stresses secularism as well as criticism of spiritual thinking and Alcoholics Anonymous (Trimpey, 1989). Rational Recovery focuses on achieving abstinence, i.e., its proponents do not consider controlled drinking a realistic goal for treatment. The focus on abstinence is a disease-model belief, yet members of Rational Recovery assert that they take no position on the disease model controversy. The findings from this study do not support the idea in Rational Recovery that secular thinking and abstinence belief are positively correlated.

Secular Organizations for Sobriety (SOS), a self-help organization founded by James Christopher, is decidedly secular in its approach, yet its founder appears to believe quite strongly in the idea that addiction is a disease: "And for me, the answer to the question, 'Can sober alcoholics ever drink again?' is an emphatic *no*." (Christopher, 1988, p. 23) "We now know . . . that alcoholics differ from nonalcoholics in key *biological* ways . . ." (Christopher, 1989, p. 25) Providers from SOS were not used in this study because providers from Rational Recovery were more accessible. Attempts to replicate these findings should include members of SOS.

SMART Recovery is a self-help organization that developed in 1994 as a result of a political split with Rational Recovery over non-profit status. There appear to be few substantial philosophical differences between SMART Recovery and Rational Recovery with regard to beliefs about addiction—both organizations are secular, focus on achieving ab-

stinence (as opposed to moderation or controlled drinking) and rely heavily on principles of cognitive therapy (SMART Recovery, 1996).

Moderation Management (MM), founded by Audrey Kishline, is the first self-help organization to teach controlled-drinking from a secular base, and is currently receiving more national publicity than any of the other alternatives to AA combined (Kishline, 1994). Kishline believes in the free-will model of addiction, eschews the spiritual thinking of AA and the necessity of abstinence orientation.

An interesting combination of spiritual thinking and the free-will model approach is espoused by William L. Playfair, M.D. Playfair argues against the disease model of addiction from a fundamentalist Christian perspective and stresses the idea that addiction is a sin (Playfair, 1991):

> There are two primary reasons I oppose sending the non-Christian to the recovery industry. He will be told his sin is a sickness; he will never be confronted with his real and most basic moral and spiritual problem. And he will more than likely be introduced to the *any god* of Twelve Stepdom, who is, by Biblical criteria, a false god.
>
> These are the very same reasons I oppose utilizing the recovery industry for Christians." (pp. 174–175)

Playfair's philosophy is unique because he relies on the writings of secular critics of the disease model to justify a strongly theological perspective on addiction: "I am deeply indebted to Herbert Fingarette and Stanton Peele whose writings sparked my desire to write this book," (Playfair, 1991, p. ix). How providers in groups such as SOS, MM and those supporting Playfair's point of view would affect the findings in this study are unknown, and it would seem worth including by anyone attempting to replicate this study.

Psychiatrists were notably absent from the sample studied (two percent). They may have a high degree of belief in the disease model, but not necessarily in AA-type spirituality. This suggests potential bias in the results—among psychiatrists, disease-model beliefs and spirituality as measured in this study may not be highly correlated. A stronger test of the hypothesis regarding the relationship between spiritual thinking and disease-model beliefs might be obtained by conducting analyses *within* each of the three samples. The SBS may measure a limited conception of what people in general (not just people in 12-step programs) think of as "spiritual." This would be a difficult scale to validate (Anonymous reviewer, personal communication, September 1994).

Understanding the role these factors play in the disease-model controversy may help to decrease strife and inefficiency in the addiction field. Providers and clients in treatment may be matched by their beliefs (Glaser, 1980; Glaser and Skinner, 1981; Lettieri *et al.*, 1980; Sells, 1981). As Schaler wrote in an analysis of the ABS (1995):

> The ABS [and SBS] can be used to match therapists and clients in treatment for addiction/substance use in a variety of ways, e.g., as part of matching the goals, techniques, settings, and temporal demands of treatment, pairing addicts "with the kind of [treatment] program best suited to their personal history and way of life" (Fingarette, 1988, pp. 115–116). People seeking help for their problems associated with addiction could be given the ABS [and SBS] and, based on their scores, matched with a program and therapist according to addiction [and spiritual] beliefs. Custom-tailored assistance programs could then be applied to larger groups of people in a more efficient way, maximizing consensual therapeutic relation-

> ships and minimizing coercive ones. Individuals seeking help could be grouped in a homogeneous fashion based on their beliefs regarding addiction, i.e., free-will versus disease models of addiction [and by their spiritual beliefs too]. (p. 131)

These factors may also be useful in personal self-examination by therapists who maintain a belief in a psychologically unsophisticated model of disease (Dodes, 1992). The findings may be used to investigate the idea that the therapeutically active features of a treatment program are not the ones the practitioners themselves believe in (Bergmakr & Oscarsson, 1991). The findings clearly answer the questions posed by Vaillant (1990): "Why . . . do experienced alcohol workers and recovering alcoholics . . . accept the view that alcoholism is a disease? Why is it mainly less competent people, the active alcoholics, who agree with Professor Fingarette that they are just 'heavy drinkers'?" Because belief in the disease model of alcoholism is strongly associated with spiritual thinking and experience in AA.

State-supported treatment programs based on the disease model of addiction, as well as coerced-treatment practices conducted by the courts, are being challenged as violations of the First Amendment of the U.S. Constitution (Luff, 1989; Weisner, 1990; Fillmore & Kelso, 1987). The extent to which belief in the disease model is associated with spiritual thinking may be of interest to persons concerned with the involvement of religion in treatment for addiction.

Further study based on these findings could inquire as to the relative effects of disease-model versus free-will model treatment programs on general feelings of self-efficacy. Scores on the ABS and SBS could be studied in relation to levels of self-efficacy before and after treatment. Addiction beliefs may be related to treatment outcome and self-efficacy regarding abstinence and controlled-drinking goals. Moreover, research has shown that gender is related to health-care practices, utilization of health-care services, reasons for seeking health-care assistance, etc. (Verbrugge, 1985; Travis, 1988; McGrath *et al.*, 1990). Knowing the relationship among gender, self-efficacy, addiction beliefs, spiritual beliefs, and health-care outcomes may be useful.

ACKNOWLEDGMENT

The author gratefully acknowledges the National Association of Alcoholism and Drug Abuse Counselors, Rational Recovery Systems, Inc., Society of Psychologists in Addictive Behaviors, Drs. Robert W. Huebner, Stanton Peele, Ernest Kurtz, Paul Antze, and Kaye Middleton; and Daniel W. "Chip" Denman, Mamdouh Sharara, and Yu-fen Chung of the Statistics Laboratory at the University of Maryland College Park for their support and important suggestions regarding this study.

References

Alcoholics Anonymous World Services. (1976) *Alcoholics Anonymous: The Story of How Many Thousands of Men and Women have Recovered from Alcoholism, 3rd Ed.* New York: Alcoholics Anonymous World Services, Inc.

Alexander, B. K. and Schweighofer, A. R. F. (1988) Defining "addiction," *Canadian Psychology*, **29**, 151–162

Alexander, B. K. (1987) The disease and adaptive models of addiction: A framework evaluation. *Journal of Drug Issues*, **17**, 47–66

Antze, P. (1987) Symbolic action in Alcoholics Anonymous, in: M. Douglas, (Ed.) *Constructive Drinking: Perspectives on Drink from Anthropology*, pp. 149–181. New York: Cambridge University Press

Bandura, A. (1977) Self-efficacy: Towards a unifying theory of behavioral change. *Psychological Review*, **84**, 191–215

Bandura, A. (1986) *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, New Jersey: Prentice-Hall

Berger, L. S. (1991) *Substance Abuse as Symptom*. Hillsdale, N.J.: The Analytic Press

Bergmakr, A. and Oscarsson, L. (1991) Does anybody really know what they are doing? Some comments related to methodology of treatment service research. *British Journal of Addiction*, **86**, 139–142

Cahalan, D. (1988) Implications of the disease concept of alcoholism, *Drugs & Society*, **2**, 49–68

Cahalan, D. (1979) Why does the alcoholism field act like a ship of fools? *British Journal of Addiction*, **74**, 235–238

Christopher, J. (1988) *How to Stay Sober: Recovery Without Religion*. Buffalo, N.Y.: Prometheus Books

Christopher, J. (1989) *Unhooked: Staying Sober and Drug-free*. Buffalo, N.Y.: Prometheus Books

Dodes, L. E. (1992) Review of *Substance Abuse as Symptom. The New England Journal of Medicine*, **326**, 1368–1369

Erickson, P. G. and Alexander, B. K. (1989) Cocaine and addictive liability. *Social Pharmacology*, **3**, 249–270

Fillmore, K. M. and Kelso, D. (1987) Coercion into alcoholism treatment: Meanings for the disease concept of alcoholism. *Journal of Drug Issues*, **17**, 301–319

Fillmore, K. M. and Sigvardsson, S. (1988) "A meeting of the minds"—A challenge to biomedical and psychosocial scientists on the ethical implications and social consequences of scientific findings in the alcohol field. *British Journal of Addictions*, **83**, 609–611

Fingarette, H. (1988) *Heavy Drinking: The Myth of Alcoholism as a Disease*. Berkeley: University of California Press

Glaser, F. B. (1980) Anybody got a match? Treatment research and the matching hypothesis, in: G. Edwards and M. Grant, (Eds.) *Alcoholism Treatment in Transition*, pp. 178–196. Baltimore, Maryland: University Park Press

Glaser, F. B. and Skinner, H. A. (1981) Matching in the real world: A practical approach, in: E. Gottheil, A. T. McLellan and K. A. Druley (Eds.), *Matching Patient Needs and Treatment Methods in Alcoholism and Drug Abuse*, pp. 295–324. Springfield, Illinois: Charles C. Thomas

Kishline, A. (1994) *Moderate Drinking: The Moderation Management Guide for People Who Want to Reduce Their Drinking*. New York: Crown Trade Paperbacks

Kurtz, E. (1988) *A. A.: The Story (A Revised Edition of Not-God: A History of Alcoholics Anonymous)*. New York: Harper & Row

Kurtz, E. and Ketcham, K. (1992) *The Spirituality of Imperfection: Modern Wisdom from Classic Stories*. New York: Bantam

Lettieri, D. J., Sayers, M. and Pearson, H. W. (1980) Editors *Theories on Drug Abuse* (N.I.D.A. Research Monograph 30). Rockville, Maryland: N.I.D.A.

Levine, H. G. (1978) The discovery of addiction: Changing conceptions of habitual drunkenness in America. *Journal of Studies on Alcohol*, **39**, 143–174

Levine, H. G. (1984) The alcohol problem in America: From Temperance to alcoholism. *British Journal of Addiction*, **79**, 109–119

Luff, E. (1989) The First Amendment and drug alcohol treatment programs: To what extent may coerced treatment programs attempt to alter beliefs relating to ultimate concerns and self concept?, in: A. S. Trebach and K. B. Zeese (Eds.) *Drug Policy 1989–90: A Reformer's Catalogue*, pp. 262–266. Washington, D.C.: Drug Policy Foundation

McGrath, E., Keita, G. P., Strickland, B. R., and Russo, N. F. (1990) *Women and Depression: Risk Factors and Treatment Issues: Final Report of the American Psychological Association Task Force on Women and Depression*. Washington, D.C.: American Psychological Association

O'Connell, T. (1991, November) Michigan historian: Spirituality at the heart of AA's success. *The U.S. Journal of Drug and Alcohol Dependence*, **15**, 2

Peele, S. (1992) Alcoholism, politics, and bureaucracy: The consensus against controlled-drinking therapy in America. *Addictive Behaviors*, **17**, 49–62

Playfair, W. L. (1991) *The Useful Lie*. Wheaton, Ill.: Good News Publishers

Roizen, R. (1987) The great controlled-drinking controversy, in: M. Galanter (Ed.) *Recent Developments in Alcoholism*, **5**, pp. 245–279. New York: Plenum Press

Room, R. (1983) Sociological aspects of the disease concept of alcoholism, in: R. G. Smart, F. B. Glaser, Y. Israel, H. Kalant, R. E. Popham, and W. Schmidt (Eds.) *Research advances in alcohol and drug problems*, **7**, pp. 47–91. New York: Plenum Press

Schaler, J. A. (1991) *Drugs and free will. Society*, **28**, 42–49
Schaler, J. A. (1992) *Addiction Beliefs of Treatment Providers: Factors Explaining Variance*. Ann Arbor, Michigan: UMI Dissertation Services, Order Number 9327490
Schaler, J. A. (1995) The Addiction Belief Scale. *International Journal of the Addictions*, **30**, 117–134
Schaler, J. A. (In press) Spiritual thinking in addiction-treatment providers. The Spiritual Belief Scale. *Alcoholism Treatment Quarterly*
Sells, S. B. (1981) Matching clients to treatments: Problems, preliminary results, and remaining tasks, in: E. Gottheil, A. T. McLellan and K. A. Druley (Eds.), *Matching Patient Needs and Treatment Methods in Alcoholism and Drug Abuse*, pp. 33–50. Springfield, Illinois: Charles C. Thomas
SMART Recovery, Inc. (1996) Official literature. (Available through SMART Recovery, Inc., 24000 Mercantile Road, Suite 11, Beachwood, Ohio, U.S.A. 44122)
Szasz, T. S. (1989, October) Interview with Andrew Meacham, associate editor of U.S. Journal periodicals, *Thomas Szasz: The politics of addiction. Focus Magazine*, 10–13
Szasz, T. S. (1972, July 8). Bad habits are not diseases. *Lancet*, 83–84
Travis, C. B. (1988) *Women and Health Psychology: Biomedical Issues*. Hillsdale, N.J.: Lawrence Erlbaum Associates
Trimpey, J. (1989) *Rational Recovery from Alcoholism: The Small Book*. Lotus, Ca.: Lotus Press
Vaillant, G. E. (1990, March) We should retain the disease concept of alcoholism. *Harvard Medical School Mental Health Letter*, **6**, 4–6
Vatz, R. E., and Weinberg, L. S. (1990) The conceptual bind in defining the volitional component of alcoholism: Consequences for public policy and scientific research. *The Journal of Mind and Behavior*, **11**, 531–544
Verbrugge, L. M. (1985) Gender and health: An update on hypotheses and evidence. *Journal of Health and Social Behavior*, **26**, 156–182
Wallston, K. A., Wallston, B. S., and DeVellis, R. (1978) Development of the Multidimensional Health Locus of Control (MHLC) scales. *Health Education Monographs*, **6**, 160–170
Wallston, K. A. (1992) Hocus-pocus, the focus isn't strictly on locus: Rotter's Social Learning Theory modified for health. *Cognitive Therapy and Research*, **16**, 183–199
Weisner, C. M. (1990) Coercion in alcohol treatment, in: Institute of Medicine (Eds.) *Broadening the Base of Treatment for Alcohol Problems*, pp. 579–609. Washington, D.C.: National Academy Press

APPENDIX A

The Multidimensional Health Locus of Control (MHLC) Scale, (Wallston et al., 1978)

I1.	If I become sick, I have the power to make myself well again. [IHLC]
I2.	I am directly responsible for my health. [IHLC]
I3.	Whatever goes wrong with my health is my own fault. [IHLC]
I4.	My physical well-being depends on how well I take care of myself. [IHLC]
I5.	When I feel ill, I know it is because I have not been taking care of myself properly. [IHLC]
I6.	I can pretty much stay healthy by taking good care of myself. [IHLC]
P7.	If I see an excellent doctor regularly, I am less likely to have health problems. [PHLC]
P8.	I can only maintain my health by consulting health professionals. [PHLC]
P9.	Other people play a big part in whether I stay healthy or become sick. [PHLC]
P10.	Health professionals keep me healthy. [PHLC]
P11.	The type of care I receive from other people is what is responsible for how well I recover from an illness. [PHLC]
P12.	Following doctor's orders to the letter is the best way for me to stay healthy. [PHLC]
C13.	No matter what I do, if I am going to get sick, I will get sick. [CHLC]
C14.	Most things that affect my health happen to me by accident. [CHLC]
C15.	Luck plays a big part in determining how soon I will recover from an illness. [CHLC]
C16.	My good health is largely a matter of good fortune. [CHLC]
C17.	No matter what I do, I'm likely to get sick. [CHLC]
C18.	If it's meant to be, I will stay healthy. [CHLC]

Note. IHLC scale $\alpha = .6357$, (standardized item $\alpha = .6610$, $n = 284$), mean = 20.76, ($SD = 3.14$, $n = 294$); PHLC scale $\alpha = .5688$, (standardized item $\alpha = .5775$, $n = 284$), mean = 14.84, ($SD = 3.14$, $n = 295$); CHLC scale and $\alpha = .6273$, (standardized item $\alpha = .6329$, $n = 282$), mean = 13.02, ($SD = 2.96$, $n = 295$).

APPENDIX B

Demographic Characteristics of the Sample

	SPAB	*RRS*	*NAADAC*	*n*	*(%)*
Gender					
Male	63 (64.0)	69 (76.0)	53 (51.0)	186	(63.1)
Female	35 (36.0)	22 (24.0)	51 (49.0)	109	(36.9)
In recovery?					
Yes	19 (19.0)	15 (17.0)	65 (63.0)	100	(33.9)
No	79 (81.0)	74 (81.0)	39 (38.0)	193	(65.4)
In AA now?					
Yes	20 (20.0)	8 (9.0)	73 (70.0)	101	(34.2)
No	78 (80.0)	83 (91.0)	31 (30.0)	194	(65.8)
In AA in the past?					
Yes	57 (58.0)	55 (60.0)	93 (89.0)	206	(69.8)
No	38 (39.0)	31 (34.0)	10 (10.0)	80	(31.0)
Abstinent?					
Yes	45 (46.0)	46 (51.0)	90 (87.0)	187	(61.7)
No	52 (53.0)	44 (48.0)	14 (14.0)	111	(37.6)

APPENDIX C

Mean Scores for the Addiction Belief Scale (ABS), Spiritual Belief Scale (SBS), and the Multidimensional Health Locus of Control scales (MHLC)

	ABSa Mean (SD, n)	*SBSc Mean (SD, n)*	*IHLCe Mean (SD, n)*	*PHLCe Mean (SD, n)*	*CHLCe Mean (SD, n)*
	54.12 (13.55, 295)	24.27 (8.55,294)	20.76 (3.15,292)	14.84 (3.15,293)	13.02 (2.96,293)
Gender[b,d]					
Males	50.91 (13.69,186)	23.11 (8.84,185)	20.88[f] (2.93,185)	15.04[h] (3.27,186)	13.08[j] (3.13,186)
Females	59.60 (11.43,109)	26.24 (7.67,109)	20.57 (3.47,109)	14.51 (2.89,109)	12.93 (2.65,109)
Professional Group[d]					
NAADAC	64.97 (8.81,104)	30.37 (6.32,104)	20.20[g] (3.02,104)	15.03[i] (2.87,104)	13.18[k] (2.73,104)
SPAB	52.88 (10.95,98)	23.93 (7.07,97)	20.79 (2.92,97)	15.32 (3.07,98)	13.09 (3.10,98)
RRS	42.89 (10.71,91)	17.75 (7.23,91)	21.37 (3.42,91)	14.10 (3.42,91)	12.75 (3.08,91)
Religious affiliation[d]					
Catholic	58.70 (11.51,46)	29.02 (6.83,46)			
Protestant	57.94 (12.91,81)	28.91 (6.63,81)			
Jewish	54.98 (10.04,42)	21.93 (6.34,42)			
Atheist	38.64 (10.39,22)	11.27 (2.62,22)			

(*continued*)

(Appendix C *continued*)

	ABSa Mean (SD, n)	*SBSc Mean (SD, n)*	*IHLCe Mean (SD, n)*	*PHLCe Mean (SD, n)*	*CHLCe Mean (SD, n)*
Agnostic	45.73 (12.48,30)	17.60 (4.99,30)			
Other	54.63 (13.76,64)	24.64 (8.49,64)			
Certified?[b,d]					
Yes	57.44 (13.10,153)	25.55 (8.81,153)			
No	50.54 (13.15,142)	22.89 (8.05,141)			
In recovery?[b,d]					
Yes	61.71 (11.87,100)	28.70 (7.21,100)			
No	50.36 (12.70,193)	22.04 (8.31,192)			
In AA now?[b,d]					
Yes	64.43 (9.37,101)	30.48 (5.82,101)			
No	48.75 (12.23,194)	21.03 (7.94,193)			
In AA in the past?[b,d]					
Yes	56.47 (13.61,206)	26.15 (8.33,206)			
No	48.08 (11.57,80)	19.25 (7.01,79)			
Abstinent?[b,d]					
Yes	58.00 (12.90,182)	26.49 (8.42,181)			
No	47.74 (12.02,111)	20.65 (7.55,111)			

Note. [a]Highest possible score is 90. [b]Two-tailed, separate variance estimate. [c]Highest possible score is 40. [d]$p = <.01$. [e]Highest possible score for each scale is 30. [f]$p = .44$. [g]$p = <.03$. [h]$p = <.14$ [i]$p = <.01$ [j]$p = <.65$. [k]$p = <.48$.

It only remains for therapists to develop their own integrative capacities for self-transcendence and, then, to assist the client's subsequent integration of theirs.

May Howard's writings remind us to do these things, not only for our clients and ourselves, but for each other.

REFERENCES

Brown, H. P., Jr. (1992). Substance abuse and the disorders of the self: Examining the relationship. *Alcoholism Treatment Quarterly, 9*(2), 1-27.

Brown, H. P., Jr. (1993). Tools for the logotherapist: A twelve-step spiritual inventory. *The International Forum for Logotherapy, 16*, 77-88.

Brown, H. P., Jr., & Peterson, J. H., Jr. (1989). Refining the BASIC-IS: a psychospiritual approach to the comprehensive outpatient treatment of drug dependency. *Alcoholism Treatment Quarterly, 6*(3/4), 27-61.

Brown, H. P., Jr., & Peterson, J. H., Jr. (1990a). Rationale and procedural suggestions for defining and actualizing spiritual values in the treatment of dependency. *Alcoholism Treatment Quarterly, 7*(3), 17-46.

Brown, H. P., Jr., & Peterson, J. H., Jr. (1990b). Values and recovery from alcoholism through Alcoholics Anonymous. *Counseling and Values, 35*, 63-68.

Brown, H. P., Jr., & Peterson, J. H., Jr. (1991). Assessing spirituality in addiction treatment and follow-up: Development of the Brown-Peterson Recovery Progress Inventory (B-PRPI). *Alcoholism Treatment Quarterly, 8*(2), 21-50.

Brown, H. P., Jr., Peterson, J. H., Jr., & Cunningham, O. (1988a). Rationale and theoretical basis for a behavioral/cognitive approach to spirituality. *Alcoholism Treatment Quarterly, 5*(1/2), 47-59.

Brown, H. P., Jr., Peterson, J. H., Jr., & Cunningham, O. (1988b). A behavioral/cognitive spiritual model for a chemical dependency aftercare program. *Alcoholism Treatment Quarterly, 5*(1/2), 153-175.

Brown, H. P., Jr., Peterson, J. H., Jr., & Cunningham, O. (1988c). An individualized behavioral approach to spiritual development for the recovering alcoholic/addict. *Alcoholism Treatment Quarterly, 5*(1/2), 177-192.

Spiritual Thinking in Addiction-Treatment Providers: The Spiritual Belief Scale (SBS)

Jeffrey A. Schaler, PhD

ABSTRACT. This study investigated spiritual thinking in addiction-treatment providers. A survey was mailed to members of three national treatment-provider organizations (n = 295). An eight-item Spiritual Belief Scale assessing spiritual thinking based on Alcoholics Anonymous (AA) philosophy (α = .92) was developed and used as the criterion.

Spiritual thinking addiction-treatment providers believe in the disease-model of addiction, are in Alcoholics Anonymous, are Catholic and Protestant. Those not inclined to believe in a metaphysical power that can influence personal experience view addiction as a willful behavior, are not in AA, and tend to be Jewish, agnostic, or atheistic.

Factor analysis of the SBS revealed two dimensions to spiritual thinking based on AA philosophy: One is characterized by a "release-gratitude-humility" dimension (subscale α = .95, n = 281) and the other is characterized by a "tolerance" dimension (subscale α = 53 n = 290). *[Article copies available from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: getinfo@haworth.com]*

INTRODUCTION

Many addiction treatment providers are addicts in recovery and have been in Alcoholics Anonymous (AA). Those individuals have

Jeffrey A. Schaler is affiliated with the Department of Human Development/Institute for Child Study, University of Maryland College Park.

Address correspondence to: Jeffrey A. Schaler, PhD, 14920 Wellwood Road, Silver Spring, MD 20905. Internet: Jschale@american.edu

The author gratefully acknowledges the assistance of Drs. Ernest Kurtz and Paul Antze in creating the Spiritual Belief Scale.

Alcoholism Treatment Quarterly, Vol. 14(3) 1996

strong beliefs about the etiology of addiction. Spiritual thinking is an integral part of the AA experience (Rice, 1944; Sessions, 1957; Klausner, 1964; Jones, 1970; Leach & Norris, 1977; Whitley, 1977; Greil & Rudy, 1983; Antze, 1987; Wilson & Jung, 1987; Kurtz, 1988; Dolan, 1988; Luff, 1989; Brown & Peterson, 1991; O'Connell, 1991). Schaler (1993) found that spiritual thinking explained 42 percent of the variance in beliefs about addiction among treatment providers.

As Madsen (1988) wrote: "The major force dealing with alcoholism today is Alcoholics Anonymous. All good treatment facilities and treatment programs aim at getting the patient into AA," (p. 26). AA has been described as a religious-conversion experience by anthropologists (Antze, 1987) as well as by the courts (Luff, 1989; Dolan, 1988). AA literature counsels participants to "turn their lives over to a higher power." This "higher power" can be anything, as long as it is not the self. Behavior change in AA and similar 12-step programs is contingent upon a change in identity and attribution. For example, as McClelland (1972) wrote,

> [t]o join it [AA], an alcoholic must admit his complete weakness and inadequacy and accept wholeheartedly the belief that to live a normal life he must be utterly dependent on a power greater than himself. In other words, he must accept the power of God as a substitute for the power of the bottle to enhance his sense of potency. God 'inspirits' him, strengthening him in place of liquor. (p. 301-302)

Or as Thune (1977) described: "A.A.'s 'treatment,' then, involves the systematic manipulation of symbolic elements within an individual's life to provide a new vision of that life, and of his world. This provides new coherence, meaning and implications for behaviors," (p. 88).

And according to Vaillant (1983),

> [AA] . . . effectively mobilizes the poorly understood ingredients present in increased religious involvement. AA . . . 'converts' individuals from one belief system to another. It is a paradox that a major goal of AA–a strictly moral and religious system–has been to view alcohol abuse as a medical illness, not a moral failing. (p. 194)

PURPOSE

The purpose of this study was to examine the nature and extent of spiritual thinking based on AA philosophy among addiction-treatment providers. "Spiritual thinking here refers to any belief in a metaphysical power said to influence personal experience characterized by feelings of release, gratitude, tolerance and humility. In this study, the terms "higher power" and "God" are used synonymously.

CHARACTERISTICS OF SPIRITUAL THINKING IN AA

"Spiritual thinking" is a broad term. Its use as a dependent variable in this study was defined in terms of how it occurs in the philosophy of AA, and is thereby related to beliefs regarding addiction (Bales, 1944; Tiebout, 1953; Stewart, 1955; Trice, 1957, 1959; Cohen, 1962; Eckhardt, 1967; Donovan, 1984).

Kurtz studied AA (1988) and traced the "evolution of AA spirituality back to a set of four discoveries made by the first members" (O'Connell, 1991).

> The spiritual is essential to being fully human but the spiritual is different[;] Spirituality involves mystery and miracle rather than magic[;] The spiritual spirituality include[s] an emphasis on being teachable and a willingness to admit that one does not have all the answers[;] Spirituality is pervasive. (O'Connell, 1991, p. 2)

Kurtz further describes four elements in the stories told by AA members which are "the primary way in which sobriety, or spirituality, is not only transmitted but grown into [in AA]" (O'Connell, 1991). Those spiritual elements are termed "release," "gratitude," "humility" and "tolerance" (O'Connell, 1991; E. Kurtz, personal

communication, January 2, 1992; Kurtz & Ketcham, 1992). "Release" pertains to truth-telling. "Gratitude" refers to the unearned "gift" from God of release from alcoholism. "Tolerance" refers to the appreciation of individual differences among AA group members. "Humility" refers to the telling of one's story or experience of trouble in life, particularly with alcohol.

According to Kurtz,

> [m]ore than any other person, the alcoholic has come close to discovering magic. For the alcoholic, alcohol *is* [emphasis in original] magic. In recovery, once the person ceases to realize that recovery is miracle and there is an air of mystery to it, and starts seeking the magic, almost certainly such a person will go back to the booze because nothing is as magical as alcohol is to the alcoholic. (O'Connell, 1991, p. 2)

Evidence of Spiritual Thinking in AA

Three popular books used in AA are "approved literature" by Alcoholics Anonymous General Service Conference–"the big book" (Alcoholics Anonymous World Services, 1976), "As Bill Sees It" (Alcoholics Anonymous World Services, 1967), and "Came to Believe" (Alcoholics Anonymous World Services, 1973), a collection of anecdotes describing "the spiritual adventure of A.A. as experienced by individual members"–and express the spiritual thinking of AA members stated by Kurtz. As further evidence of spiritual thinking found in AA the following passages are presented, excerpted from "the big book," as it is called in AA, the "bible" of AA (Alcoholics Anonymous World Services, 1976). Note not only the relationship with God but also the relationship advocated towards self:

> The central factor of our lives today is the absolute certainty that our Creator has entered into our hearts and lives in a way which is indeed miraculous. He has commenced to accomplish those things for us which we could never do by ourselves . . . The delusion that we are like other people, or presently may be, has to be smashed . . . Whether such a person [those unable to drink moderately] can quit upon a non-spiritual basis depends upon the extent to which he has already lost the power to choose whether he will drink or not . . . Lack of power, that was our dilemma. We had to find a power by which we could live, and it had to be a *Power greater than ourselves* [emphasis in original] . . . [The big book's] . . . main object is to enable you to find a Power greater than yourself which will solve your problem . . . We agnostics and atheists were sticking to the idea that self-sufficiency would solve our problems . . . Our ideas did not work. But the God idea did . . . When we became alcoholics, crushed by a self-imposed crisis we could not postpone or evade, we had to fearlessly face the proposition that either God is everything or else He is nothing. God either is, or He isn't. What was our choice to be? . . . The first requirement is that we be convinced that any life run on self-will can hardly be a success . . . The alcoholic is an extreme example of self-will run riot . . . Relieve me of the bondage of self . . . Being convinced that self, manifested in various ways, was what had defeated us . . . [W]e have been not only mentally and physically ill, we have been spiritually sick. When the spiritual malady is overcome, we straighten out mentally and physically . . . We trust infinite God rather than our finite selves . . . Faith did for us what we could not do for ourselves . . . We hope that you are convinced now that God can remove whatever self-will has blocked you off from Him . . . We ask ourselves for freedom from self-will, and are careful to make no requests for ourselves only . . . *The main thing is that he be willing to believe in a Power greater than himself and that he live by spiritual principles* [emphasis in original]. (Alcoholics Anonymous World Services, 1976, pps. 25, 30, 34, 45, 52, 53, 60, 62, 63, 64, 65, 68, 70, 71, 87, 93)

Examples of the Four Characteristics of Spiritual Thinking in AA

Each of the following examples contain a reference to "God" or the "higher power," as God is often referred to in AA. They are characterized by the general qualities of "miracle" and "mystery" and the four categories of "release," "humility," "gratitude," and "tolerance." These statements have been slightly modified from

AA literature to improve clarity (adapted from Alcoholics Anonymous World Services, 1967, 1973, 1976; Kurtz, 1988).

Gratitude

Two examples of spiritual beliefs found in those books and characterized by *gratitude* are the following: "The central factor of my life today is the absolute certainty that my Creator has entered into my heart and life in a way which is indeed miraculous." "When I make right decisions in my life I believe it is important to thank God for giving me the courage and the grace to act in this way."

Tolerance

Two examples of spiritual beliefs found in those books and characterized by *tolerance* are the following: "I believe that people who have done wrong to me are perhaps spiritually sick. I think it is best to ask God to help me show them the same tolerance, pity, and patience that I should give to a sick friend." "I have no desire to convince anyone that there is only one way by which faith can be acquired. All of us, whatever our race, creed, color, or beliefs, are the children of a living Creator, with whom we may form a simple, understandable relationship, as soon as we are willing enough to try."

Humility

Two examples of spiritual beliefs found in those books and characterized by *humility* are the following: "First of all, in order to begin solving my problems, I had to quit playing God. I had to realize that I was not God." (According to Kurtz, the idea that the alcoholic is not God pervades all AA philosophy and literature.) "I seek through prayer and meditation to improve my conscious contact with God as I understand Him, praying only for knowledge of His will and the power to carry that out."

Release

Finally, two examples of spiritual beliefs found in those books and characterized by *release* are the following: "My 'higher power' has mysteriously accomplished those things in my life which I could never do by myself." "I got positive results in my life when I laid aside prejudice and expressed a willingness to believe in a Power greater than myself, even though it is impossible for me to fully define or comprehend that Power, which is God."

To summarize the rationale for using spiritual thinking as a dependent variable in this study, it is important to consider the following: People addicted to various drugs who have been in AA appear to attribute their recovery from addiction to a "higher power," a "power greater than themselves," "God," or anything other than self. Many addiction-treatment providers consider themselves to be in recovery and have had experience in AA. Addiction-treatment providers who attribute their recovery from addiction to a spiritual "higher power" attribute the inability to control addiction to a non-self factor such as a physiological disease (Schaler, 1993). The specific characteristics of spiritual thinking as it occurs in AA need to be taken into account when measuring spiritual thinking among addiction-treatment providers in order to assess its possible influence accurately.

METHOD

A survey was sent to addiction-treatment providers. A pilot version of the survey was administered to providers at two clinics in the Washington, D.C. metropolitan area to assess reliability of the various instruments as well as to incorporate comments regarding the design and structure of survey items. Formal reliability analyses were conducted on the pilot scale results. After changes were made in the construction and selection of items, a total of 511 seven-page surveys with cover letter were mailed to addiction-treatment providers in the U.S., Canada, and Australia.

Two hundred instruments were distributed to a random sample of members of the National Association of Alcoholism and Drug Abuse Counselors (NAADAC), the largest association of alcoholism counselors in the United States. Official statements by this organization have described addiction as a treatable disease. The organization is also actively involved in certifying alcohol and drug counselors.

One hundred forty-four instruments were mailed to the complete list of treatment providers serving as supervisors for Rational Recovery Systems (RRS) groups, a national, secular-based alternative to AA groups that is currently undergoing rapid growth and expansion throughout the U.S. Official statements from this organization emphasize abstinence as the most effective way of controlling addiction. It appears to take no official position on the disease-model controversy, yet is often critical of AA on anti-religious grounds.

One hundred sixty-seven instruments were mailed to addiction-treatment providers who are members of the Society of Psychologists in Addictive Behaviors (SPAB), a national organization in the U.S. The secretary/treasurer of SPAB hand-picked these members on the basis of their having listed themselves as treatment providers. The organization was used at the suggestion of Dr. G. Alan Marlatt, a widely recognized expert in the field of addiction. SPAS's orientation to addiction was unknown. The organization has now become Division 50 of the American Psychological Association. These three organizations were chosen to represent a diversity of beliefs. While other organizations of treatment providers exist, these groups were selected on the basis of suspected diversity and accessibility.

Each participant received a letter introducing the study, the instrument and instructions. A self-addressed, stamped envelope was included, along with a request that participants return the instrument as soon as possible. Confidentiality was assured in the cover letter. Each survey had a handwritten number in the upper-right corner of the first page, which corresponded to a number on the mailing list of participants. As surveys were returned, this number was cut off and discarded, and the name of the participant was crossed off the mailing list. Those names not crossed off after two weeks were sent reminder postcards.

Completed and returned surveys totaled 327 constituting an initial 64 percent return rate. Of these, 32 respondents indicated they were not addiction-treatment providers; therefore, 295 providers established the primary sample studied, 58 percent of those sent a survey (n = 295). One hundred four surveys were returned from NAADAC (52 percent of those mailed to this group); ninety-eight surveys were returned from SPAB (59 percent of those mailed); and

ninety-one surveys were returned from RRS (63 percent of those mailed). Two respondents had cut off the group-identifying number, making it impossible to determine which group they belonged to.

The entire survey was used to investigate factors explaining variance in beliefs regarding the etiology of addiction (Schaler, 1993, 1995). It consisted of the Addiction Belief Scale (ABS), an eight-item Spiritual Belief Scale (SBS), the Multidimensional Health Locus of Control Scales (Wallston et al., 1978), requests for demographic information, comments, and an estimate regarding the percentage of addicted persons respondents believed get over their addiction without any form of medical or 12-step type treatment.

For the purposes of this present study, one part of the original inventory was examined in further detail–the Spiritual Belief Scale (SBS). In the first study (Schaler, 1993, 1995), the SBS was used as an independent variable. In the present study, the SBS was used as a dependent measure.

Table 1 presents the Addiction Belief Scale (ABS) by Schaler (1993). A five-point Likert scale was used to assess beliefs regarding addiction along the disease-model/free-will model spectrum. The higher the score on the ABS, the stronger the belief in the disease model of addiction. The lower the score on the ABS, the stronger the belief in the free-will model of addiction.

THE SPIRITUAL BELIEF SCALE (SBS)

The SBS included eight items measuring spiritual thinking, shown in Table 2. These items were adapted from AA literature. Each contains a reference to God or "spiritual health." The items are grouped according to the analysis of four spiritual characteristics of AA developed by Ernest Kurtz (Kurtz, 1988; O'Connell, 1991; Kurtz & Ketcham, 1992). The SBS was examined by Dr. Kurtz and anthropologist Dr. Paul Antze, of York University, Toronto, for face validity (Antze, 1987). Their suggestions were incorporated in the development of the SBS inventory.

Items 1 and 2 in Table 2 express the release element: The original representative-belief statements extracted from Alcoholics Anonymous literature were: "My 'Higher Power' has mysteriously accomplished those things in my life which I could never do by

TABLE 1. The Addiction Belief Scale (ABS)

[A1] Most addicts don't know they have a problem and must be forced to recognize they are addicts. [Disease model]

[A2] Addicts cannot control themselves when they drink or take drugs. [Disease model]

[A3] The only solution to drug addiction and/or alcoholism is treatment. [Disease model]

[A4] The best way to overcome addiction is by relying on your own willpower. [Free-will model]

[A5] Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem. [Disease model]

[A6] People can stop relying on drugs or alcohol as they develop new ways to deal with life. [Free-will model]

[A7] Addiction has more to do with the environments people live in, than the drugs they are addicted to. [Free-will model]

[A8] People often outgrow drug and alcohol addiction. [Free-will model]

[A9] The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it. [Disease model]

[A10] Abstinence is the only way to control alcoholism/drug addiction. [Disease model]

[A11] Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not. [Disease model]

[A12] Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use. [Free-will model]

[A13] People become addicted to drugs/alcohol when life is going badly for them. [Free-will model]

[A14] The fact that alcoholism runs in families means that it is a genetic disease. [Disease model]

TABLE 1 (continued)

[A15] You have to rely on yourself to overcome an addiction such as alcoholism [Free-will model]

[A16] Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity. [Free-will model]

[A17] People who are drug addicted can never outgrow addiction and are always in danger of relapsing. [Disease model]

[A18] Drug addiction is a way of life people rely on to cope with the world. [Free-will model]

Note. $\alpha = .91$, (standardized item $\alpha = .91$, $n = 266$), mean = 54.12, ($SD = 13.55$, $n = 295$). The highest possible score is 90. The higher the score, the stronger the belief in the disease-model of addiction. The lower the score, the stronger the belief in the free-will model of addiction.

TABLE 2. The Spiritual Belief Scale (SBS)

[S1] I feel that in many ways turning my life over to God has actually set me free. [Release]

[S2] I know that all the best things in my life have come to me through God. [Release]

[S3] I believe I am blessed by God with many gifts I do not deserve. [Gratitude]

[S4] I feel it is important to thank God when I manage to do the right thing. [Gratitude]

[S5] It's only when I stop trying to play God that I can begin to learn what God wants for me. [Humility]

[S6] I know I am able to meet life's challenges only with God's help. [Humility]

[S7] I know that forgiving those who have hurt me is important for my spiritual health. [Tolerance]

[S8] I believe there are many ways to know God and that my way is not the only way. [Tolerance]

Note. $\alpha = .92$, (standardized item $\alpha = .91$, $n = 280$), mean = 24.27, ($SD = 8.55$, $n = 294$). The highest possible score is 40. The higher the score, the stronger the belief in a metaphysical power that can influence personal experience (spiritual thinking).

myself." "I got positive results in my life when I laid aside prejudice and expressed a willingness to believe in a Power greater than myself, even though it is impossible for me to fully define or comprehend that Power, which is God." The SBS statements were: "I feel that in many ways turning my life over to God has actually set me free." "I know that all the best things in my life have come to me through God."

Items 3 and 4 in Table 2 express the gratitude element. The original representative-belief statements extracted from Alcoholics Anonymous literature were: "The central factor of my life today is the absolute certainty that my Creator has entered into my heart and life in a way which is indeed miraculous." "When I make right decisions in my life I believe it is important to thank God for giving me the courage and the grace to act in this way." The SBS statements were: "I believe I am blessed by God with many gifts I do not deserve." "I feel it is important to thank God when I manage to do the right thing."

Items 5 and 6 in Table 2 express the humility element. The original representative-belief statements extracted from AA literature were: "First of all, in order to begin solving my problems, I had to quit playing God. I had to realize that I was not God." "I seek through prayer and meditation to improve my conscious contact with God as I understand Him, praying only for knowledge of His will and the power to carry that out." The SBS statements are: "It's only when I stop trying to play God that I can begin to learn what God wants for me." "I know I am able to meet life's challenges only with God's help."

Items 7 and 8 in Table 2 express the tolerance element. The original representative-belief statements extracted from AA literature were: "I believe that people who have done wrong to me are perhaps spiritually sick. I think it is best to ask God to help me show them the same tolerance, pity, and patience that I should give to a sick friend." "I have no desire to convince anyone that there is only one way by which faith can be acquired. All of us, whatever our race, creed, color, or beliefs, are the children of a living Creator, with whom we may form a simple, understandable relationship, as soon as we are willing enough to try." The SBS statements are: "I know that forgiving those who have hurt me is important for my spiritual health." "I believe there are many ways to know God and that my way is not the only way."

Subjects were asked to mark the extent to which they agreed or disagreed with the statements along a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The SBS was scored in the direction of high spiritual belief, i.e., the higher the score, the more the subject tends to engage in spiritual thinking along the dimensions described. Cronbach's alpha was calculated for the SBS and $\alpha = .92$ (standardized item $\alpha = .91$, $n = 280$).

Sample Characteristics

Subjects were asked to indicate their age at last birthday; gender; race/ethnic background; marital status; education status (highest); religious affiliation; whether they were an addiction-treatment provider; whether they were certified as an alcohol or addiction counselor; whether they considered themselves to be an alcoholic or addict in recovery; whether they currently attended AA or any other 12-step program; how long they had been in AA or any other 12-step program; whether they had attended AA or any other 12-step program in the past; whether they were currently abstinent from alcohol and/or mood-altering drugs; and the number of drinks/drugs they took per week. Table 3 summarizes this information for the sample. The mean age of respondents at last birthday was 44.04 years ($SD = 9.68$, $n = 293$). The mean number of years respondents had spent in AA was 5.04 years ($SD = 6.89$, $n = 224$). One hundred seventeen respondents indicated they had spent no time in AA. The mean number of drugs and/or drinks consumed per week was 1.82 ($SD = 3.21$, $n = 130$).

Two hundred eight respondents were Caucasian (94.9 percent), seven were African-American (2.4 percent), four were Hispanic (one percent), three were American Indian (one percent) and one was Asian (.3 percent). Forty one respondents were never married (13.9 percent), 187 were married (63.4 percent), six were widowed (two percent), and 59 were separated/divorced (20 percent). Twenty eight respondents indicated they had "some college" (nine and a half percent), 39 had bachelor degrees (13.2 percent), 218 had graduate degrees (73.9 percent), six had medical degrees (two percent), and three indicated they had "other" educational

TABLE 3. Demographic Characteristics of the Sample

	SPAB	RRS	NAADAC	n	(%)
Gender					
Male	63 (64.0)	69 (76.0)	53 (51.0)	186	(63.1)
Female	35 (36.0)	22 (24.0)	51 (49.0)	109	(36.9)
In recovery?					
Yes	19 (19.0)	15 (17.0)	65 (63.0)	100	(33.9)
No	79 (81.0)	74 (81.0)	39 (38.0)	193	(65.4)
In AA now?					
Yes	20 (20.0)	8 (9.0)	73 (70.0)	101	(34.2)
No	78 (80.0)	83 (91.0)	31 (30.0)	194	(65.8)
In AA in the past?					
Yes	57 (58.0)	55 (60.0)	93 (89.0)	206	(69.8)
No	38 (39.0)	31 (34.0)	10 (10.0)	80	(31.0)
Abstinent?					
Yes	45 (46.0)	46 (51.0)	90 (87.0)	187	(61.7)
No	52 (53.0)	44 (48.0)	14 (14.0)	111	(37.6)

backgrounds (one percent). Eighty one respondents indicated that they were Protestants (27.5 percent), 46 were Catholic (15.6 percent), 42 were Jewish (14.2 percent), 22 were atheist (seven and a half percent), 30 were agnostic (10.2 percent), and 64 indicated "other" regarding religious background (21.7 percent). One hundred fifty three respondents indicated they were certified as treatment providers (51.9 percent) and 142 indicated they were not (48.1).

Treatment-provider groups included 98(33.2%) from SPAB, 63(64%) males and 35(36%) females; 91(30.8%) from RRS, 69(76%) males and 22(24%) females; and 104 (35.3%) from NAADAC, 53(51%) males and 51(49%) females. Table 3 reflects the sample characteristics by treatment-provider group. The three groups varied significantly by gender ($x^2 = 12.97$, $df = 2$, $p < .001$).

Statistical Procedures

Cronbach's alpha, Pearson's Product Moment Correlations, stepwise regression, and factor analysis were conducted for the

SBS using the Statistical Package for the Social Sciences (SPSS) computer program on an IBM mainframe computer at the University of Maryland Computer Science Center. Reliability, means, and standard deviations, as well as t-tests for the SBS were calculated first. Pearson's correlations were conducted second to ascertain the strength and direction of the relationship between scores on the SBS and the various demographic characteristics of subjects. A stepwise-multiple-regression procedure was utilized for purely exploratory purposes to find out which of the variables best explained variance in spiritual thinking as defined through scores on the SBS.

Factor analysis of the SBS utilizing varimax rotation was calculated after this. Reliability statistics for the factors extracted through factor analysis were calculated to assess the consistency of the subscales, along with means and standard deviations for these subscales. T-tests were performed on the subscales to assess gender differences. Finally, Pearson's correlations were conducted to determine the relationship between the two subscales and the SBS as a whole.

RESULTS

The mean score on the SBS was 24.27, ($SD = 8.55$, $n = 294$). Statistically-significant differences in scores on the SBS by gender, certification status, addict-in-recovery status, AA status, abstinence status, and treatment-provider group membership are presented in Table 4.

Correlation Coefficients for Spiritual Beliefs

Table 5 lists the correlations for nine variables with the SBS that were significant at the .01 level. Whether or not respondents were in AA now was most strongly correlated with spiritual beliefs, followed by the number of years they had been in AA, whether they considered themselves to be addicts in recovery, whether they had been in AA in the past, whether they were abstinent from alcohol and/or mood-altering drugs, their educational status, their scores on

TABLE 4. Mean Scores for the Spiritual Belief Scale (SBS)[a]

	Mean	*SD*	*n*	*p*
SBS	24.27	8.55	294	
Gender[b]				.002
Males	23.11	8.84	185	
Females	26.24	7.67	109	
Professional Group				<.001
SPAB	23.93	7.07	97	
RRS	17.75	7.23	91	
NAADAC	30.37	6.32	104	
Religious affiliation				<.001
Catholic	29.02	6.83	46	
Protestant	28.91	6.63	81	
Jewish	21.93	6.34	42	
Agnostic	17.60	4.99	30	
Atheist	11.27	2.62	22	
Other	24.64	8.49	64	
Certified?[b]				.007
Yes	25.55	8.81	153	
No	22.89	8.05	141	
In recovery?				<.001
Yes	28.70	7.21	100	
No	22.04	8.31	192	
In AA now?[b]				<.001
Yes	30.48	5.82	101	
No	21.03	7.94	193	

TABLE 4 (continued)

In AA now?[b]				<.001
Yes	30.48	5.82	101	
No	21.03	7.94	193	
In AA in the past?[b]				<.001
Yes	26.15	8.33	206	
No	19.25	7.01	79	
Abstinent?[b]				<.001
Yes	26.49	8.42	181	
No	20.65	7.55	111	

Note: [a]Highest possible score is 40. [b]Two-tailed sep. variance estimate.

the "powerful others" dimension of the MHLC, and whether they were certified as addiction/alcoholism counselors. The direction of these correlations is listed in Table 5.

Results for the Stepwise Regression Analysis

There were ninety-one missing cases. Missing cases by variables included the following: SBS = one; IHLC = one; age = two; educational status = one; recovery status = two; time spent in AA = 71; in AA in the past = nine; abstinence status = two; drug frequency = two.

Table 6 shows the results for a stepwise regression using all demographic variables, the ABS scores, and the MHLC scale scores as predictors. The stepwise procedure was used for exploratory purposes only.

Four variables were statistically-significant in their ability to explain variance in scores on the SBS. Scores on the ABS were entered into the equation at step one and explained 42 percent of the variance in spiritual thinking, as measured by the SBS. This is the same finding by Schaler (1993). Whether respondents were in AA or not was entered at step two and explained an additional six percent of the variance in spiritual thinking, over scores on the ABS, a finding that is significant at the $p < .001$ level. Whether

TABLE 5. Correlation Coefficients for Spiritual Beliefs (SBS)

	r
In AA now?[a]	−.53
Years in AA	.44
Addict in recovery?[a]	−.37
In AA in the past?[a]	−.36
Abstinent?[a]	−.33
Drink/drug frequency/week	−.28
Educational status[b]	−.25
PHLC[c]	.21
Gender[d]	.18
Certified?[a]	−.16

Note: $p = .01$. [a]1 = yes, 2 = no. [b]Seven levels. [c]The "powerful others" dimesion of the Multidimensional Health Locus of Control scale. The higher the score, the more person attribute responsibility for their experience of health and illness to powerful others. [d]1 = male, 2 = female.

respondents were Catholic or not was entered at step three of the equation and explained an additional five percent of the variance in spiritual thinking, over and above scores on the ABS and whether or not respondents were in AA. Whether respondents were Protestant or not was entered at step four of the equation and explained an additional seven percent of the variance in spiritual thinking, over and above scores on the ABS, whether or not respondents were in AA, and whether or not respondents were Catholic. Together, these four variables explained 58 percent of the variance in spiritual thinking, as measured by the SBS. No other variables were entered into the equation at $p < .05$.

Results for the Factor Analysis of the SBS

As Table 7 shows, two factors were extracted from the SBS utilizing varimax rotation–Kaiser normalization. The first factor had an Eigenvalue of 5.17 and explained 64.7 percent of variance in

TABLE 6. Stepwise Regression of SBS

Order of Entry[a]	*R*	*R*²	*Increase* *R*²	*F*	*df*	*p*
ABS[b]	.64447	.41535		150.60817	1,212	<.001
AAnow	.68648	.47126	.05591	94.03030	2,212	<.001
Catholic	.71831	.51597	.04471	74.61767	3,210	<.001
Protestant	.76316	.58241	.06644	72.87212	4,209	<.001

Note: [a]Independent variables were the three dimensions of the Multidimensional Health Locus of Control Scale, age, gender, marital status (never married, married, widowed, seperated/divorced–dummy coded), educational status (not high school graduate, high school graduate, some college, bachelor's degree, graduate degree, medical degree, other), religious status (Protestant, Catholic, Jewish, Muslim, Atheist, Agnostic, other–dummy coded), addiction-treatment provider status, certification status, addict in recovery status, AA status (past & present), time in AA, abstinence status, amount of alcoholic beverages/mood-altering drugs consumed/week, treatment-provider group status. [b]Total scores on the Addiction Belief Scale.

the SBS. The first six items on the SBS, items 51-56, were highly correlated (>.50) and grouped together representing the three spiritual dimensions of release, gratitude, and humility, the highest correlation was for item 54 at .91. This item reads: I feel it is important to thank God when I manage to do the right thing. It was designed to express the gratitude element of spirituality. Cronbach's alpha for this factor one was .9497, standardized item alpha = .9491, n = 281 (six items).

Factor 2 had an Eigenvalue of 1.08 and explained 13.4 percent of the variance in the SBS. Items 57 and 58 correlated highest here, both designed to represent the tolerance dimension of spirituality 58 with the highest correlation at .91. Cronbach's alpha for this factor two was .5260, standardized item alpha = .5273, n = 290, (two items).

A correlation matrix was constructed to study the relationship between the two subscales, and their relation to the SBS as a whole. Table 8 presents these results. Note that factors one and two are strongly and positively correlated with the SBS, and moderately and positively correlated with one another.

Means and standard deviations for the subscales formed through factor loading are presented in Table 9 along with t-tests conducted for gender differences.

DISCUSSION

The SBS appears to be a reliable measure, as indicated by the high Cronbach's alpha, where α = .92. Addiction-treatment providers are spiritual thinkers, i.e., they tend to believe rather strongly in a metaphysical power that can influence personal experience, as indicated by the mean of 24.27 on the SBS. Female addiction-treatment providers, those who are certified as treatment providers, in recovery, in AA now, in AA in the past, and are abstinent believe more strongly in a metaphysical power that can influence personal experience than males, those who are not certified, those not in recovery, not in AA now, not in AA in the past, and those who are not abstinent. Members of NAADAC tend to be the strongest spiritual thinkers, followed by members of SPAB and then RRS. Catholics tend to believe more strongly in a metaphysical

TABLE 7. Factor Analysis of Scores on the Spiritual Belief Scale: Varimax Rotation

		Factor 1	Factor 2
Eigenvalue		5.17	1.08
Percent of Explained Variance		64.70	13.40
Cumulative Percent of Explained Variance		64.70	78.10
[S1]	I feel that in many ways turning my life over to God has actually set me free. [Release]	.85	.24
[S2]	I know that all the best things in life have come to me through God. [Release]	.89	.26
[S3]	I believe I am blessed by God with many gifts I do not deserve. [Gratitude]	.80	– .04
[S4]	I feel it is important to thank God when I manage to do the right thing. [Gratitude]	.91	.21
[S5]	It's only when I stop trying to play God that I can begin to learn what God wants from me. [Humility]	.82	.37
[S6]	I know I am able to meet life's challenges only with God's help. [Humility]	.89	.25
[S7]	I know that forgiving those who have hurt me is important for my spiritual health. [Tolerance]	.41	.67
[S8]	I believe there are many ways to know God and and that my way is not the only way. [Tolerance]	.03	.91

TABLE 8. Correlation Matrix of Subscales for the SBS

	Factor 1	Factor 2
SBS[a]	.9840	.6587
Factor 1		.5015

Note: [a]Total scores. $p = .01$, (two-tailed)

TABLE 9. Mean Scores on the SBS Subscales

	Mean[a]	*SD*	*n*	*t*[b]	*df*	p
Factor 1	16.55	7.41	281			
Gender				−2.55	240.91	.011
Males	15.51	7.55	183			
Females	17.73	7.00	109			
Factor 2	8.10	1.70	290			
Gender				−3.85	283.28	<.001
Males	7.77	1.91	185			
Females	8.51	1.34	109			

Notes: [a]The higher the score on each of the subscales, the stronger the spiritual thinking. Highest possible score for Factor 1 = 30; for Factor 2 = 10.
[b]Two-tailed seperate variance estimate.

power that can influence personal experience than Protestants, followed by those who are Jewish, agnostic, atheistic, and of "other" denominations.

Addiction-treatment providers who have spent more time in AA are likely to be stronger spiritual thinkers than those who have spent less time in AA. The higher the frequency of alcoholic beverages/mood-altering drugs consumed per week, the less likely the treatment provider is to engage in spiritual thinking. The higher the educational status, the lower the spiritual thinking. The more addiction-treatment providers are likely to attribute responsibility for their health and illness to powerful others, the more likely they are to believe that a metaphysical power can influence personal experience.

Scores on the ABS, followed by current AA status, and whether the treatment-provider is Catholic and/or Protestant or not explains the greatest amount of variance in spiritual beliefs.

The factor analysis of scores on the SBS shows that the three dimensions of spirituality characterized by release, gratitude, and humility, are not as distinct as originally thought to be: The three dimensions are positively correlated with one another. The tolerance dimension separated from the other three and is more distinct. *Thus, there appear to be two characteristics of spiritual thinking measured by the SBS, not four: Release, gratitude, and humility constitute one dimension and tolerance constitutes the other.*

The item with the highest loading on the first factor, S4, "I feel it is important to thank God when I manage to do the right thing," is most representative of the three dimensions. The statement contains elements of release and humility, in addition to gratitude. For example, "doing the right thing," can be interpreted as a release from doing the wrong things. "Thanking God" for something the individual does that is considered good, is a form of humility. So, from a logical point of view, it makes sense that the three dimensions group together on this statement.

The item with the highest loading on the second factor, S8, "I believe there are many ways to know God and that my way is not the only way," is most representative of the tolerance dimension. In the reliability analysis of the SBS, this was the item that, if deleted, raised the alpha level from .94 to .96. The item also has the highest mean, 4.30 ($SD = .10$, $n = 280$), compared to the seven other items which have an average mean of 2.91.

This final statement, item S8, is one that may be difficult to disagree with. The purpose of the SBS is to measure spiritual thinking, as defined by belief in a metaphysical entity that can influence experience. People who assert they do not believe in God may well be inclined to agree with this statement. People who assert they believe in God may well be inclined to disagree with the statement.

For example, a self-described atheist or agnostic may believe that diverse paths to knowing God are equally legitimate in being illegitimate, i.e., they are all false because either God does not exist, or can't be known. Yet, when a person agrees with the statement, he or

she is expressing a belief in God, in that God is something that exists, something that can be known in diverse ways. To be intellectually consistent, the true atheist and/or agnostic should theoretically disagree with this statement. If God does not exist, or we cannot know that God exists, then one way of knowing God, or diverse ways of knowing God, are equally false.

On the other hand, many people believe their way of knowing God is the only way. Therefore, they may disagree with the statement and yet still believe in God and engage in spiritual thinking. For example, the survey was given to a woman who described herself as an ex-nun and currently a born-again Christian. She said she disagreed with the statement because she believes that Jesus is the only way a person can know God.

A final point is worth mentioning: Note that item S3 on the second factor, which reads "I believe I am blessed by God with many gifts I do not deserve," is the only item to be negatively correlated with the others. Many treatment providers objected to the "I do not deserve" part of this statement (see Appendix G in Schaler, 1993). This item had the lowest mean, 2.29 ($SD = 1.23$, $n = 280$); compared to the other seven items. It is the most distant item from tolerance in the sense that the more treatment providers believe there are many ways to know God, and that their way is not the only way, they believe they are deserving of the gifts they feel God has blessed them with. Certainly this final belief is not indicative of humility.

These points aside, the SBS appears to do a good job of assessing spiritual thinking, the release, gratitude and humility dimensions are not as distinct in the minds of addiction-treatment providers as was originally believed to be, and the three of them together are quite distinct from the tolerance dimension of spiritual thinking.

CONCLUSIONS

Spiritual thinking, defined in this study as belief in a metaphysical power that can influence personal experience, appears to be an integral part of the lives of addiction-treatment providers, especially for those who are female, in AA, Catholic, and Protestant. The findings of this study support the idea that there are two

dimensions to spiritual thinking in AA. One dimension incorporates spiritual beliefs characterized by release, gratitude, and humility. The second dimension incorporates spiritual beliefs characterized by tolerance.

The Spiritual Belief Scale (SBS) appears to be a reliable instrument of spiritual thinking and has been successfully used as both an independent and dependent measure. While it was constructed based on Alcoholics Anonymous philosophy, and used exclusively with addiction-treatment providers, it should find usefulness applied to other populations as well. Moreover, comparisons on scores between diverse populations may prove enlightening insofar as deepening our understanding of spiritual thinking in general.

REFERENCES

Alcoholics Anonymous World Services. (1967). *As Bill sees it: The A.A. way of life . . . Selected writings of A.A.'s co-founder.* New York: Alcoholics Anonymous World Services, Inc.

Alcoholics Anonymous World Services. (1973). *Came to believe . . . The spiritual adventure of A.A. as experienced by individual members.* New York: Alcoholics Anonymous World Services.

Alcoholics Anonymous World Services. (1976). *Alcoholics Anonymous: The story of how many thousands of men and women have recovered from alcoholism, (3rd ed.).* New York: Alcoholics Anonymous World Services, Inc.

Antze, P. (1987). Symbolic action in Alcoholics Anonymous. In M. Douglas (Ed.), *Constructive drinking: Perspectives on drink from anthropology* (pp. 149-181). New York: Cambridge University Press.

Bales, R.F. (1944). The therapeutic role of Alcoholics Anonymous as seen by a sociologist. *Quarterly Journal of Studies on Alcohol, 2,* 267-278.

Brown, H.P. & Peterson, J.H. (1991). Assessing spirituality in addiction treatment and follow-up: Development of the Brown-Peterson Recovery Progress Inventory (BPRPI). *Alcoholism Treatment Quarterly, 8,* 21-50.

Cohen, F. (1962). Personality changes among members of Alcoholics Anonymous. *Mental Hygiene, 46,* 427-437.

Dolan, M.A. (1988, August 9). God, the courts, and AA. *The Evening Sun (Baltimore),* p. A6.

Donovan, M.E. (1984). A sociological analysis of commitment generation in Alcoholics Anonymous. *British Journal of Addiction, 79,* 411-418.

Eckhardt, W. (1967). Alcoholic values and Alcoholics Anonymous. *Quarterly Journal of Studies on Alcohol, 28,* 277-288.

Greil, A.L. & Rudy, D.R. (1983). Conversion to the world view of Alcoholics Anonymous: A refinement of conversion theory. *Qualitative Sociology, 6,* 5-28.

Jones, R.K. (1970). Sectarian characteristics of Alcoholics Anonymous. *Sociology: The Journal of the British Sociological Association, 4*, 181-195.

Klausner, S.Z. (1964). Sacred and profane meanings of blood and alcohol. *The Journal of Social Psychology, 64*, 27-43.

Kurtz, E. (1988). *A.A.: The Story (A revised edition of Not-God: A history of Alcoholics Anonymous)*. New York: Harper & Row.

Kurtz, E. & Ketcham, K. (1992). *The spirituality of imperfection: Modern wisdom from classic stories*. New York: Bantam.

Leach, B. & Norris, J.L. (1977). Factors in the development of Alcoholics Anonymous (A.A.). In B. Kissin and H. Begleiter (Eds.), *Treatment and rehabilitation of the chronic alcoholic: The biology of alcoholism, volume 5* (pp. 441-543). New York: Plenum Press.

Luff, E. (1989). The First Amendment and drug alcohol treatment programs: To what extent may coerced treatment programs attempt to alter beliefs relating to ultimate concerns and self concept? In A.S. Trebach & K.B. Zeese (Eds.) *Drug policy 1989-90: A reformer's catalogue* (pp. 262-266). Washington, D.C.: Drug Policy Foundation.

Madsen, W. (1988). *Defending the disease: From facts to Fingarette*. Akron, Ohio: Wilson, Brown & Co.

McClelland, D.C., Davis, W.N., Kalin, R., & Wanner, E. (1972). *The drinking man: Alcohol and human motivation*. New York: Free Press.

O'Connell, T. (1991, November). Michigan historian: Spirituality at the heart of AA's success. The U.S. *Journal of Drug and Alcohol Dependence, 15*, 2.

Rice, O.R. (1944). The contribution of the minister to the treatment of the alcoholic. *Quarterly Journal of Studies on Alcohol, 5*, 250-256.

Schaler, J.A. (1995). The addiction belief scale. *International Journal of the Addictions, 30*, 117-134.

Schaler, J.A. (1993). *Addiction beliefs of treatment providers: Factors explaining variance*. Ann Arbor, Michigan: UMI Dissertation Services (Order Number 9327490).

Sessions, P.M. (1957). Ego religion and superego religion in alcoholics. *Quarterly Journal of Studies on Alcohol, 18*, 121-125.

Stewart, D.A. (1954). The dynamics of fellowship as illustrated in Alcoholics Anonymous. *Quarterly Journal of Studies on Alcohol, 16*, 251-262.

Thune, C.E. (1977). Alcoholism and the archetypal past: A phenomenological perspective on Alcoholics Anonymous. *Journal of Studies on Alcohol, 38*, 75-88.

Tiebout, H.M. (1953). Surrender versus compliance in therapy: With special reference to alcoholism. *Quarterly Journal of Studies on Alcohol, 14*, 58-68.

Trice, H.M. (1959). The affiliative motive and readiness to join Alcoholics Anonymous. *Quarterly Journal of Studies on Alcohol, 20*, 313-320.

Trice, H.M. (1957). A study of the process of affiliation with Alcoholics Anonymous. *Quarterly Journal of Studies on Alcohol, 18*, 39-54.

Vaillant, G.E. (1983). *The natural history of alcoholism*. Cambridge, Mass.: Harvard University Press.

Wallston, K.A., Wallston, B.S., & DeVellis, A. (1978). Development of the Multidimensional Health Locus of Control (MHLC) scales. *Health Education Monographs, 6*, 160-170.

Whitley, O.R. (1977). Life with Alcoholics Anonymous: The Methodist class meeting as a paradigm. *Journal of Studies on Alcohol, 38*, 831-848.

Wilson, B., & Jung, C.G. (1987, Summer). Spiritus contra spiritum: The Bill Wilson/C.G. Jung letters–the roots of the society of Alcoholics Anonymous. *Parabola*, 68-71.

The International Journal of the Addictions, 30(2), 117–134, 1995

The Addiction Belief Scale*

Jeffrey A. Schaler, Ph.D.

Department of Human Development/Institute for Child Study, University of Maryland College Park, College Park, Maryland

ABSTRACT

An eighteen-item Addiction Belief Scale (ABS) was developed to assess strength of belief in the disease versus free-will model of addiction ($\alpha = .91$). Factor analysis of the ABS revealed three dimensions to the disease-model controversy of addiction: These include beliefs regarding personal power (subscale $\alpha = .91$, $n = 274$), dichotomous thinking (subscale $\alpha = .83$, $n = 285$), and addiction as a way of coping with life (subscale $\alpha = .47$, $n = 286$). A discussion of scale analysis and suggestions for application of the ABS as a clinical and research instrument are presented.

Key words. Disease-model controversy; Free will; Power; Dichotomous thinking; Matching

INTRODUCTION

While the physical-health risks of mood-altering drug use, i.e., what these drugs do to the physical body, are relatively well known, heated controversy exists within the alcohol/drug-research and policy fields concerning the relationship between cognitive, behavioral, and physiological processes, and what motivates or governs addiction (e.g., Szasz, 1972, 1989; Fillmore and Sigvardsson, 1988; Fingarette, 1985, 1988; Peele, 1991, 1992; Peele et al.,

*Requests for reprints should be sent to the author at 14920 Wellwood Road, Silver Spring, MD 20905. Internet: Jschale@American.edu

1991; Alexander, 1987; Keller, 1976; Lettieri et al., 1980; Maltzman, 1991; Vatz and Weinberg, 1990; Madsen, 1988, 1989). This well-documented debate is known as "the disease-model controversy."

There are more than two models for drug use, misuse, abuse, addiction, and dependency. This study is concerned with beliefs integral to the disease-model controversy. The disease model of addiction refers to the idea that addiction is an involuntary behavior characterized by "loss of control" (Jellinek, 1960). The free-will model of addiction refers to the idea that addiction is a voluntary behavior characterized by willfulness and responsibility (Schaler, 1991).

The word "addiction" comes from the Latin *dicere* (infinitive form) and, combined with the preposition *ad* means "to say yes to," "consent." Consent implies voluntary acceptance (Schaler, 1989). An individual referred to as an alcoholic or drug addict in this study is one whose drug "consumption consistently has a negative influence on important components of his daily life" (Miller and Mastria, 1977; Donovan and Marlatt, 1980).

The Addiction Belief Scale (ABS) was originally created to investigate factors explaining variance in beliefs about addiction among treatment providers. Factor analysis of this scale, derived subscales, reliability findings, an interpretation of underlying dimensions involved in the disease-model controversy, and suggestions for application of the ABS as a new and potentially useful measure with wide applicability in a variety of clinical and research settings are offered here.

METHOD

Procedure

A total of 511 seven-page surveys with cover letter were mailed to addiction-treatment providers in the United States, Canada, and Australia in May of 1992.

Two hundred instruments were distributed to a random sample of members of the National Association of Alcoholism and Drug Abuse Counselors (NAADAC), the largest association of alcoholism counselors in the United States.

One hundred forty-four instruments were mailed to the complete list of treatment providers serving as supervisors for Rational Recovery Systems (RRS) groups, a national, secular-based alternative to Alcoholics Anonymous (A.A.) groups currently undergoing rapid growth and expansion throughout the United States.

One hundred sixty-seven instruments were mailed to addiction-treatment providers who are members of the Society for Psychologists in Addictive Behaviors (SPAB), a national organization. The secretary/treasurer of SPAB handpicked these members on the basis of their having listed themselves as treatment providers.

Completed and returned surveys totaled 327 and were received by mail within 2 months of the initial mailing, constituting a 64% return rate. Of these, 32 respondents indicated they were not addiction-treatment providers, therefore, 295 addiction-treatment providers established the primary sample studied, (n = 295) (Schaler, 1993).

The Addiction Belief Scale (ABS)

The ABS was composed of 18 statements representing beliefs regarding the etiology of drug addiction and addicts' ability to control their addiction (Table 1).

Nine items were statements characterizing a belief in the disease model of addiction. Nine items were statements characterizing belief in the free-will model of addiction. The statements representing the two perspectives are marked by brackets in Table 1.

Recovery Beliefs

A request for the percentage of drug addicts respondents believed get over their addiction without any form of medical or 12-step-type treatment was presented. The purpose of this item was to check validity of the ABS. Percentage figures from 0 to 100 were listed in intervals of 10, and subjects were asked to circle the appropriate percentage figure. The question was asked in the following way: "What percentage of drug addicts do you believe get over their addiction *without* any form of medical or 12-step-type treatment? (Please circle one)"

Sample Characteristics

Treatment-provider group membership included 98 (33.2%) from SPAB, 63 (64%) males and 35 (36%) females; 91 (30.8%) from RRS, 69 (76%) males and 22 (24%) females; and 104 (35.3%) from NAADAC, 53 (51%) males and 51 (49%) females. Table 2 lists the demographic characteristics of the sample. The three groups, SPAB, RRS, and NAADAC, varied significantly by gender in terms of expected and observed frequencies (χ^2 = 12.97, df = 2, $p < .001$).

Table 1.

The Addiction Belief Scale (ABS)[a]

[A1]	Most addicts don't know they have a problem and must be forced to recognize they are addicts. [Disease model]
[A2]	Addicts cannot control themselves when they drink or take drugs. [Disease model]
[A3]	The only solution to drug addiction and/or alcoholism is treatment. [Disease model]
[A4]	The best way to overcome addiction is by relying on your own willpower. [Free-will model]
[A5]	Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem. [Disease model]
[A6]	People can stop relying on drugs or alcohol as they develop new ways to deal with life. [Free-will model]
[A7]	Addiction has more to do with the environments people live in than the drugs they are addicted to. [Free-will model]
[A8]	People often outgrow drug and alcohol addiction. [Free-will model]
[A9]	The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it. [Disease model]
[A10]	Abstinence is the only way to control alcoholism/drug addiction. [Disease model]
[A11]	Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not. [Disease model]
[A12]	Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use. [Free-will model]
[A13]	People become addicted to drugs/alcohol when life is going badly for them. [Free-will model]
[A14]	The fact that alcoholism runs in families means that it is a genetic disease. [Disease model]
[A15]	You have to rely on yourself to overcome an addiction such as alcoholism. [Free-will model]
[A16]	Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity. [Free-will model]
[A17]	People who are drug addicted can never outgrow addiction and are always in danger of relapsing. [Disease model]
[A18]	Drug addiction is a way of life people rely on to cope with the world. [Free-will model]

[a] $\alpha = .91$, (standardized item $\alpha = .91$, $n = 266$), mean = 54.12, (SD = 13.55, $n = 295$). Subjects were asked to mark the extent to which they agreed or disagreed with each statement along a 5-point Likert scale ranging from "strongly disagree," "disagree," and "uncertain" to "agree" and "strongly agree." The stronger the belief in a disease-model item, the higher the score for that item. The stronger the belief in a free-will item, the lower the score for that item. Thus, disease-model items were scored 5 for "strongly agree" and 1 for "strongly disagree." Free-will model items were scored 1 for "strongly agree" and 5 for "strongly disagree." The higher the degree of belief in the disease model of addiction, the higher their total score. The highest possible score is 90.

Table 2.

Demographic Characteristics of the Sample

	Mean	(SD)	*n*	(%)
Age (at last birthday)	44.04	(9.68)	293	
"How long have you been in A.A. or any other 12-step program?" Years in A.A.	5.04	6.89	224	
"If you do drink alcohol and/or use mood-altering drugs, please enter the average number of drinks/times you use drugs per week."	1.82	3.21	130	
Gender:				
Male			186	(63.10)
Female			109	(36.90)
Race/ethnic background:				
White			208	(94.90)
Black			7	(2.40)
Hispanic			4	(1.00)
American				
Indian/Alaskan Native			3	(1.00)
Asian			1	(0.30)
Marital status:				
Never married			41	(13.90)
Married			187	(63.40)
Widowed			6	(2.00)
Separated/divorced			59	(20.00)
Educational status (check highest):				
Some college			28	(9.50)
Bachelor Degree			39	(13.20)
Graduate Degree			218	(73.90)
Medical Degree			6	(2.00)
Other			3	(1.00)
Religious affiliation:				
Protestant			81	(27.50)
Catholic			46	(15.60)
Jewish			42	(14.20)
Atheist			22	(7.50)
Agnostic			30	(10.20)
Other			64	(21.70)
Are you a Certified Alcohol or Addiction Counselor?				
Yes			153	(51.90)
No			142	(48.10)
Do you consider yourself to be an alcoholic or addict in recovery?				
Yes			100	(33.90)
No			193	(65.40)

(*continued*)

Table 2. *Continued*

	Mean	(SD)	*n*	(%)
Do you currently attend Alcoholics Anonymous?				
Yes			101	(34.20)
No			194	(65.80)
Have you attended A.A. or any other 12-step programs in the past?				
Yes			206	(69.80)
No			80	(31.00)
Are you currently abstinent from alcohol and/or mood-altering drugs?				
Yes			187	(61.70)
No			111	(37.60)

Statistical Procedures

In order to investigate the reliability and validity of the ABS, Cronbach's alpha, Pearson's Product Moment Correlations, and factor analysis were conducted using the Statistical Package for the Social Sciences (SPSS) computer program on an IBM mainframe computer at the University of Maryland Computer Science Center. Reliability, means, and standard deviations, as well as *t*-tests for the ABS, were calculated first. The mean and standard deviation for recovery beliefs without treatment was calculated next. Calculation of the Pearson's Product Moment Correlation for the ABS and recovery beliefs followed. Factor analysis of the ABS utilizing varimax rotation was calculated after this. Reliability statistics for the factors extracted through factor analysis were calculated to assess the consistency of the subscales. Finally, Pearson's correlations were conducted to determine the relationship between the three subscales.

RESULTS

Results for the ABS

The results for the ABS are presented in Table 3, including mean scores, standard deviations, and *t*-test results for significant differences of mean scores on the ABS between groups. The percentage of addicts respondents who believed they could get over their addiction without any form of medical or 12-step-type treatment was negatively correlated with scores on the ABS, where $r = -.67$ and $p < .01$ (two-tailed, range = 100). The mean percentage of addicts respondents who believed they got over their addiction without treatment was 25.07 (SD = 24.42, $n = 293$). The higher the percentage figure,

Table 3.

Mean Scores for the Addiction Belief Scale (ABS)[a]

	Mean	SD	*n*	*p*
ABS	54.12	13.55	295	
Gender[b]				<.01
Males	50.91	13.69	186	
Females	59.60	11.43	109	
Professional group				<.01
NAADAC	64.97	08.81	104	
SPAB	52.88	10.95	98	
RRS	42.89	10.71	91	
Religious affiliation:				<.01
Protestant	57.94	12.91	81	
Catholic	58.70	11.51	46	
Jewish	54.98	10.04	42	
Atheist	38.64	10.39	22	
Agnostic	45.73	12.48	30	
Other	54.63	13.76	64	
Certified?[b]				<.01
Yes	57.44	13.10	153	
No	50.54	13.15	142	
In recovery?[b]				<.01
Yes	61.71	11.87	100	
No	50.36	12.70	193	
In A.A. now?[b]				<.01
Yes	64.43	09.37	101	
No	48.75	12.23	194	
In A.A. in the past?[b]				<.01
Yes	56.47	13.61	206	
No	48.08	11.57	80	
Abstinent?[b]				<.01
Yes	58.00	12.90	182	
No	47.74	12.02	111	

[a]Highest possible score is 90. The higher the score, the stronger the belief in the disease model of addiction. The lower the score, the stronger the belief in the free-will model.

[b]Two-tailed, separate variance estimate.

the more addicts respondents believed they could get over their addiction without medical or 12-step-type treatment.

Results of the Factor Analysis of the Addiction Belief Scale

As Table 4 shows, three factors were extracted from the ABS utilizing varimax rotation—Kaiser normalization. Factor 1 had an eigenvalue of 7.22

Table 4. *Factor Analysis of Scores on the Addiction Belief Scale: Varimax Rotation*

		Factor 1	Factor 2	Factor 3
Eigenvalue		7.22	1.59	1.04
Percent of explained variance		40.10	18.80	5.80
Cumulative percent of explained variance		40.10	49.00	54.80
[A1]	Most addicts don't know they have a problem and must be forced to recognize they are addicts. [Disease model]	.52[a]	.11	.07
[A2]	Addicts cannot control themselves when they drink or take drugs. [Disease model]	.64[a]	.24	.13
[A3]	The only solution to drug addiction and/or alcoholism is treatment. [Disease model]	.59[a]	.34	−.30
[A4]	The best way to overcome addiction is by relying on your own willpower. [Free-will model]	.69[a]	.04	.22
[A6]	People can stop relying on drugs or alcohol as they develop new ways to deal with life. [Free-will model]	.02	.05	.65[c]
[A7]	Addiction has more to do with the environments people live in than the drugs they are addicted to. [Free-will model]	.22	.40	.44
[A8]	People often outgrow drug and alcohol addiction. [Free-will model]	.52[a]	.46	.26
[A12]	Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use. [Free-will model]	.56[a]	.54[b]	.10
[A13]	People become addicted to drugs/alcohol when life is going badly for them. [Free-will model]	.19	.14	.61[c]
[A15]	You have to rely on yourself to overcome an addiction such as alcoholism. [Free-will model]	.70[a]	−.00	.37
[A5]	Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem. [Disease model]	.51[a]	.56[b]	.14
[A9]	The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it. [Disease model]	.71[a]	.45	.09
[A10]	Abstinence is the only way to control alcoholism/drug addiction. [Disease model]	.61[a]	.57[b]	−.03
[A11]	Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not. [Disease model]	.04	.80[b]	.27
[A14]	The fact that alcoholism runs in families means that it is a genetic disease. [Disease model]	.29	.71[b]	.10
[A17]	People who are drug addicted can never outgrow addiction and are always in danger of relapsing. [Disease model]	.62[a]	.47	.10
[A16]	Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity. [Free-will model]	.69[a]	.33[b]	.04
[A18]	Drug addiction is a way of life people rely on to cope with the world. [Free-will model]	.05	.11	.68[c]

[a]Cronbach's alpha = .91, (n = 274, standardized item alpha = .91).
[b]Cronbach's alpha = .83, (n = 285, standardized item alpha = .83).
[c]Cronbach's alpha = .47, (n = 286, standardized item alpha = .47).

Table 5.

Correlation Matrix of Subscales for the ABS

	Factor 1	Factor 2	Factor 3
ABS[a]	.9720	.8982	.5051
Factor 1		.8623	.3433
Factor 2			.3552

[a]Total scores. $p = .01$ (two-tailed).

and explained 40.1% of variance. The items with the highest correlations (>.50) for this factor were A1 (.52), A2 (.64), A3 (.59), A5 (.51), A9 (.71), A10 (.61), and A17 (.62), which were all designed to represent the disease-model dimension, and A4 (.69), A8 (.52), A12 (56), A15 (.70), and A16 (.69), all designed to represent the free-will dimension. Item A9, with the highest correlation (.71), reads: The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it.

Factor 2 had an eigenvalue of 1.59 and explained 18.8% of variance in the ABS. The item with the highest correlation on this factor was A11 with a correlation of .80. This item reads: Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not. Items A11, A5 (.56), A10 (.57), and A14 (.71) were all designed to represent the disease-model dimension. Item A12 was the only other item in Factor 2 that had a correlation above .50 (.54). It was designed to represent the free-will dimension.

Factor 3 had an eigenvalue of 1.04, and explained 5.8% of the variance in the ABS. Three items grouped together with high correlations on this factor, all designed to represent the free-will perspective, with A18 the highest at .68. A18 reads: Drug addiction is a way of life people rely on to cope with the world. The other two items were A6 (.65) and A13 (.61).

A correlation matrix (Table 5) was created to assess the relationship between scores on each of the three subscales, as well as their relationship with total scores for the ABS.

Means and standard deviations for the subscales formed through factor loading are presented in Table 6 along with *t*-tests conducted for gender differences.

DISCUSSION

The ABS has strong internal consistency. High construct validity is evidenced by the strong, negative correlation with recovery beliefs.

There appears to be three dimensions to the disease-model controversy as evidenced by the factor analysis. These are as "power," "dichotomous-think-

Table 6.

Mean Scores on the ABS Subscales

	Mean[a]	SD	*n*	*t*[b]	*df*	*p*
Factor 1:	38.31	10.96	274			
Gender				−6.17	264.48	< .01
Males	35.31	11.01	186			
Females	42.56	8.90	109			
Factor 2:	15.29	4.86	285			
Gender				−6.35	255.67	< .01
Males	13.95	4.82	186			
Females	17.31	4.10	109			
Factor 3:	7.47	1.88	286			
Gender				−0.91	207.33	< .35
Males	7.29	1.89	186			
Females	7.51	2.10	109			

[a]The higher the score on each of the subscales, the stronger the belief in the disease model of addiction. The lower the score, the stronger the belief in the free-will model. Highest possible score for Factor 1 = 60; for Factor 2 = 25; for Factor 3 = 15.
[b]Two-tailed separate variance estimate.

ing," and a "way-of-coping-with-life" dimension. Factors 1 and 2 are strongly correlated with one another and define two subscales with high reliability. Significant differences for scores on these two subscales occurred by gender.

The dichotomous-thinking dimension running through Factor 2 supports the idea set forth by Alexander and Rollins (1984) that A.A. is a cult, as characterized by Lifton (1961). The idea of addiction as a "way of life," or "way of coping with life," runs through Factor 3 and supports explanations for alcoholism offered by Fingarette (1988) (e.g., "central activity") as well as Alexander's adaptive model of addiction.

That treatment providers hold contradictory points of view regarding the disease and willful nature of addiction supports Caetano's (1987) findings that conceptions about alcoholism are "not entirely consistent in the public's mind: the disease concept may be contradicted and supported at the same time" (Caetano, 1987, p. 158). The fact that treatment providers appear to hold contradictory beliefs regarding addiction, e.g., disease model and free-will model items load together on the same factor, does not necessarily detract from the content and construct validity of this measure.

Five free-will beliefs loaded high on Factor 1: A4, A8, A12, A15, and A16 with seven disease-model beliefs. Factor 2 loaded items that were disease-model beliefs with the exception of A12. Factor 3 loaded only free-will items. Since Factor 3 loaded only free-will items, further commentary is unwarranted.

Moreover, Factor 3 explained only 5.8% of the variance in the ABS and was weakly correlated with Factors 1 (r = .34) and 2 (r = .36) and moderately correlated with the overall ABS (r = .51).

Factor 2 included one item expressing the free-will model, A12, and it had the lowest correlation of the items that loaded highest on this factor (.53). The underlying dimension for Factor 2 is explained as dichotomous thinking. Of the other four items, A5, A10, A11, and A14, A12 seems most at odds with A10, for here we have diametrically opposed viewpoints on the controlled-drinking/drug-taking controversy, yet the two are positively correlated with one another. Addiction-treatment providers who believe that abstinence is the only way to control alcoholism/drug addiction also believe that alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use!

One way of explaining this contradiction is that people who believe that addicts can moderate their addiction also believe that they *will* not moderate it (i.e., they *choose* not to do so). Therefore the best solution to their drug problem is abstinence, despite the fact they believe that addicts have the *ability* to moderate addiction. They may believe that the best approach to helping drug addicts is the abstinence approach, which is really more of a utilitarian perspective on addiction treatment than an accurate one.

In terms of the apparent contradiction of simultaneously held beliefs for Factor 1 (power), seven of the items that loaded here are disease-model items and five are free-will model. All are highly correlated with one another in a positive way.

Item A4, "The best way to overcome addiction is by relying on your own willpower," contradicts A3, "The only solution to drug addiction and/or alcoholism is treatment," and A9, "The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it." Those who disagree with the disease model may also disagree with the belief that willpower is the best way. The statement may suggest to them that people who are drug addicted don't need help or support from others, and the idea that they can rely solely on their own willpower may seem to be an unreasonable expectation that could lead to further addiction and problems in living. That a drug addict should rely on others for help in solving problems does not necessarily mean to these addiction-treatment providers that addiction is a disease devoid of volition components. In this sense, the holding of these two beliefs is not inconsistent. Abstinence and seeking help from others are still willful acts, and a person exercises willpower in seeking to fulfill these acts. Therefore, a contradiction, strictly speaking, does seem to be present in the minds of those who hold these two beliefs.

A8, "People often outgrow drug and alcohol addiction," is inconsistent with all other disease-model items at first glance, yet the contradiction with the first six items, especially A1, A2, A3, A5, A9, and A10, can be resolved

through the following reasoning: People can outgrow drug and alcohol addiction *if* they are forced to recognize they are addicts, get treatment for their addiction, acknowledge they are powerless to their addiction, and engage in abstinence.

A17 is the trouble item. How can people who believe in A17, "People who are drug addicted can never outgrow addiction and are always in danger of relapsing," also believe that "People often outgrow drug and alcohol addiction" (A8)? The focus for some treatment providers on A17 may be the latter part of the statement—people who are drug addicted are always in danger of relapsing. This part of the statement is not inconsistent with A8.

People often contradict themselves. Respondents in this study may have been taught to believe that addicts cannot "mature out" (Winick, 1962) of their addiction when they personally and privately believe that addicts can. Respondents may have learned that addiction can never be overcome or outgrown, as part of the ideology of their own treatment program, if they themselves are addicts in recovery. They may have learned to believe certain ideas about addiction because they were taught that their own sobriety was contingent upon faith in them. For example, believing addiction is a disease is an integral part of treatment for the putative disease. Until the "patient" exhibits signs of belief in the disease, they often are considered to be "resisting" progress. Despite these beliefs, treatment providers may well observe that their clients are in fact "maturing out" of their addiction. The discrepancy between what addiction-treatment providers may have learned to believe, based on their own experience of addiction and sobriety, or perhaps as part of becoming certified as an addiction-treatment counselor, or some other educational and/or professional certification process, and what they may know to be true, based on their own observations of addicts, may be surfacing here.

The Dichotomous-Thinking Dimension

While 80% of the items that loaded over .50 on Factor 2 represent the disease model, an underlying dimension is present throughout all of them—dichotomous thinking. For example, in A5, "Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem," the dichotomous perspective on addiction as a disease is explicit. Moreover, the statement expresses dichotomous thinking in its second half: There is no such thing as a middle ground when it comes to addiction. Either a person is an addict or he or she is not. There is a sense of absolutism here.

A10, "Abstinence is the only way to control alcoholism/drug addiction," expresses dichotomous thinking through the use of the word "only." This is a unilateral perspective on addiction and its control. Disease modelists assert

abstinence is the only way. Free-will modelists accept both abstinence and controlled-drinking/drug ingestion as feasible goals for treatment.

A11, "Physiology, not psychology, determines whether one drinker will become addicted to alcohol and another will not," is another clear statement of dichotomous thinking, and is the most representative statement for Factor 2. Again, there is a sense of absolutism present in this black or white belief. *Either* physiology *or* psychology determines addiction in this case. The more treatment providers agree with the statement, the more they view addiction dichotomously. There is no gray area.

A14, "The fact that alcoholism runs in families means that it is a genetic disease," is perhaps difficult to understand as an expression of dichotomous thinking. It is an absolute statement in the sense that alcoholism is genetically determined, i.e., no choice, or that it is learned, i.e., a function of environmental interaction. If people see alcoholism as a combination of the two, they should disagree with the statement.

And finally, A12, "Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use," is a free-will modelist's belief and represents the flip side of A10, which asserts that abstinence is the only way to control alcoholism/drug addiction. The controlled-drinking and/or drug-taking versus abstinence controversy is often viewed as a mutually-exclusive issue, and much of the controversy has centered on these two approaches. The free-will modelist believes in the addict's ability to moderate drug ingestion. The disease modelist refutes this. The disease modelist tends to see the controversy from an either–or perspective, i.e., moderate drinking or drug ingestion is not an option for the addict: A goal of moderated drug ingestion for an addict equals death.

The Power Dimension

While many of the other items that loaded high on the power dimension (Factor 1) can be interpreted as expressing the dichotomous-thinking dimension (Factor 2), they do not seem salient. Seven disease-model items correlate highly with the five free-will model items, another apparent contradiction.

These twelve items all express beliefs about power. A1, "Most addicts don't know they have a problem and must be forced to recognize they are addicts," while a statement that clearly expresses a disease-model orientation to addiction, also communicates a belief about power. One might interpret this statement as saying that the addiction problem is so powerful addicts don't even know they have a problem, and, being powerless in this respect, must rely on the power of others to force them to recognize they are addicts.

A2, "Addicts cannot control themselves when they drink or take drugs," is again a statement expressing beliefs about power—addicts do not have the

power to control themselves. A3, "The only solution to drug addiction and/or alcoholism is treatment," can be construed as a statement expressing beliefs about power in the sense that the power of treatment is the only solution to addiction, i.e., everything else is powerless.

A5, "Addiction is an all-or-nothing disease: A person cannot be a temporary drug addict with a mild drinking or drug problem," expresses a belief about power in the sense that when a person has the disease called addiction, which is either present as a disease or not, there is no power that a person can exercise to moderate the problem. A9, "The most important step in overcoming an addiction is to acknowledge that you are powerless and can't control it," expresses the power theme again clearly. A10, "Abstinence is the only way to control alcoholism/drug addiction," is another power statement in the sense that abstinence is the way to control or have power over addiction. A17, "People who are drug addicted can never outgrow addiction and are always in danger of relapsing," expresses the power theme in the sense that addicts are at risk of the danger of a powerful force called relapse, one that is so powerful it cannot be outgrown, i.e., even the power of maturation cannot overcome the power of addiction.

A4, "The best way to overcome addiction is by relying on your own willpower," is obviously a power statement, only this time the power theme refers to the power within or of the self. A8, "People often outgrow drug and alcohol addiction," refers to the power of maturation as a force able to overcome the power of addiction. A12, "Alcoholics and drug addicts can learn to moderate their drinking or cut down on their drug use," is a free-will model statement that refers to a person's ability to exercise the power of moderate or controlled drinking and drug use as a way of dealing with the power of addiction. A15, "You have to rely on yourself to overcome an addiction such as alcoholism," refers to the power of self, not others, to overcome the power of addiction. And finally A16, "Drug addicts and alcoholics can find their own ways out of addiction, without outside help, given the opportunity," is a power-oriented statement in the sense that it is similar to A15 and refers to the power of self, really self-efficacy, as contrasted with outside help, or the power of nonself forces, e.g., others, in overcoming the power of addiction.

Thus, a theme of power, self-power, powerlessness, powerful others, and the power of addiction runs through these 12 items, despite the fact that the first seven were designed to express the disease-model orientation to addiction and the second 12 were designed to express the free-will model. Power is a unifying theme for those items that loaded high on Factor 1.

Females scored higher than males on the power and dichotomous-thinking dimensions. Women are more disconnected and alienated from their own sense of personal power in regard to their beliefs about addiction. They also tend to hold more dichotomous beliefs about addiction than men do. These

gender findings lend further support to the finding by Schaler (1993) that gender is a significant factor in explaining addiction beliefs of treatment providers.

APPLICATIONS

The ABS can be used to match therapists and clients in treatment for addiction/substance use in a variety of ways, e.g., as part of matching the goals, techniques, settings, and temporal demands of treatment (Glaser, 1980; Glaser and Skinner, 1981; Sells, 1981), pairing addicts "with the kind of [treatment] program best suited to their personal history and way of life" (Fingarette, 1988, pp. 115–116). People seeking help for their problems associated with addiction could be given the ABS and, based on their scores, matched with a program and therapist according to addiction beliefs. Custom-tailored assistance programs could then be applied to larger groups of people in a more efficient way, maximizing consensual therapeutic relationships and minimizing coercive ones. Individuals seeking help could be grouped in a homogeneous fashion based on their beliefs regarding addiction, i.e., free-will versus disease models of addiction.

Undoubtedly the successful use of matching is partially due to the fact that addicts are a heterogeneous population of individuals using drugs in diverse ways for many different reasons who impute a range of meanings to the substances they use, their use and/or abstinence. There is no single, representative addict. Addiction is not a homogeneous entity. There is no single belief about addiction true for everyone. Ultimately, the ABS can be used in a variety of situations to account for these differences.

Research on self-efficacy has shown that beliefs about ability to succeed at a specific behavioral task are strongly related to task outcome (Bandura, 1977, 1986; Wallston, 1992). The ABS could be used to custom-tailor treatment programs based on addiction-model orientation. Instead of coercing individuals resistant to a particular treatment orientation into adopting disagreeable beliefs and practices regarding addiction, the ABS could identify homogeneous groups and work with them accordingly. Those therapists inclined to believe in the disease model of addiction in various degrees could work together and with clients who share their beliefs. Free-will modelists could be identified to work together with clients in a similar way. Moreover, scores on the power and dichotomous dimensions, used as separate scales (Factors 1 and 2), could be used to investigate self-efficacy (power) and borderline/splitting tendencies (dichotomous thinking). Maximally consensual and minimally coercive treatment practices and goals could be more easily achieved.

The ABS could be used as either an independent or dependent measure. As an independent measure, the ABS could be used to predict treatment out-

come based on treatment group membership. As a dependent measure, the ABS has been used successfully to ascertain factors that account for variance in beliefs regarding addiction (Schaler, 1993). Other applications in this regard might include studying the relationship between addiction beliefs and personality orientation, self-esteem, cognitive styles, tolerance for ambiguity, etc.

CONCLUSIONS

The Addiction Belief Scale exhibits high construct validity and reliability. Beliefs regarding power, addiction as a way of coping with life, and dichotomous thinking underlie the disease-model controversy. The ABS can be used to facilitate matching in therapy for people seeking help with their addiction, and as a dependent or independent measure in a variety of research investigations.

ACKNOWLEDGMENTS

The author gratefully acknowledges Drs. Stanton Peele and Kaye Middleton for their important suggestions regarding this study.

REFERENCES

ALEXANDER, B. K. (1987). The disease and adaptive models of addiction: A framework evaluation. *J. Drug Issues* 17: 47–66.

ALEXANDER, F., and ROLLINS, M. (1984). Alcoholics Anonymous: The unseen cult. *Calif. Sociol.* pp. 33–48 (Winter).

BANDURA, A. (1977). Self-efficacy: Towards a unifying theory of behavioral change. *Psychol. Rev.* 84: 191–215.

BANDURA, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, New Jersey: Prentice-Hall.

CAETANO, R. (1987). Public options about alcoholism and its treatment. *J. Stud. Alcohol* 48: 153–160.

DONOVAN, D. M., and MARLATT, G. A. (1980). Assessment of expectancies and behaviors associated with alcohol consumption: A cognitive-behavioral approach. *J. Stud. Alcohol* 41: 1153–1185.

FILLMORE, K. M., and SIGVARDSSON, S. (1988). "A meeting of the minds"—A challenge to biomedical and psychosocial scientists on the ethical implications and social consequences of scientific findings in the alcohol field. *Br. J. Addict.* 83: 609–611.

FINGARETTE, H. (1985). Alcoholism—Neither sin nor disease. *Center Mag.* 18: 56–63.

FINGARETTE, H. (1988). *Heavy Drinking: The Myth of Alcoholism as a Disease*. Berkeley: University of California Press.

GLASER, F. B. (1980). Anybody got a match? Treatment research and the matching hypothesis. In G. Edwards and M. Grant (Eds.), *Alcoholism Treatment in Transition*. Baltimore, Maryland: University Park Press, pp. 178–196.

GLASER, F. B., and SKINNER, H. A. (1981). Matching in the real world: A practical approach. In E. Gottheil, A. T. McLellan, and K. A. Druley (Eds.), *Matching Patient Needs and Treat-*

ment Methods in Alcoholism and Drug Abuse. Springfield, Illinois: Charles C. Thomas, pp. 295–324.

JELLINEK, E. M. (1960). *The Disease Concept of Alcoholism*. New Haven, Connecticut: Hillhouse Press.

KELLER, M. (1976). The disease concept of alcoholism revisited. *J. Stud. Alcohol* 37: 1694–1717.

LETTIERI, D. J., SAYERS, M., and PEARSON, H. W. (Eds.) (1980). *Theories on Drug Abuse* (N.I.D.A. Research Monograph 30). Rockville, Maryland: N.I.D.A.

LIFTON, R. J. (1961). *Thought Reform and the Psychology of Totalism: A Study of "Brainwashing" in China*. New York: Norton.

MADSEN, W. (1988). *Defending the Disease: From Facts to Fingarette*. Akron, Ohio: Wilson, Brown & Co.

MADSEN, W. (1989). Thin thinking about heavy drinking. *Public Interest*. 95 (Spring): 112–118.

MALTZMAN, I. (1991). Is alcoholism a disease? A critical review of a controversy. *Integrative Physiol. Behav. Sci.* 26: 200–210.

MILLER, P. M., and MASTRIA, M. A. (1977). *Alternatives to Alcohol Abuse: A Social Learning Model*. Champaign, Illinois: Research Press.

PEELE, S. (1991). Herbert Fingarette, radical revisionist: Why are people so upset with this retiring philosopher? In M. I. Bockover (Ed.), *Rules, Rituals, and Responsibility: Essays Dedicated to Herbert Fingarette*. La Salle, Illinois: Open Court, pp. 37–53.

PEELE, S. (1992). Alcoholism, politics, and bureaucracy. The consensus against controlled-drinking therapy in America. *Addict. Behav.* 17: 49–62.

PEELE, S., BRODSKY, A., and ARNOLD, M. (1991). *The Truth about Addiction and Recovery*. New York: Simon & Schuster.

SCHALER, J. A. (1989). Alcoholism as willful misconduct. *JAMA* 261: 864–865.

SCHALER, J. A. (1991). Drugs and free will. *Society* 28: 42–49.

SCHALER, J. A. (1993). *Addiction Beliefs of Treatment Providers: Factors Explaining Variance*. Ann Arbor, Michigan: UMI Dissertation Services (Order Number 9327490).

SELLS, S. B. (1981). Matching clients to treatments: Problems, preliminary results, and remaining tasks. In E. Gottheil, A. McLellan, A. Thomas, and K. A. Druley (Eds.), *Matching Patient Needs and Treatment Methods in Alcoholism and Drug Abuse* Springfield, Illinois: Charles C. Thomas, pp. 33–50.

SZASZ, T. S. (1972). Bad habits are not diseases. *Lancet* pp. 83–84 (July 8).

SZASZ, T. S. (1989). Interview with Andrew Meacham, associate editor of U.S. Journal periodicals, *Thomas Szasz: The politics of addiction. Focus Mag.* pp. 10–13 (October).

VATZ, R. E., and WEINBERG, L. S. (1990). The conceptual bind in defining the volitional component of alcoholism: Consequences for public policy and scientific research. *J. Mind Behav.* 11: 531–544.

WALLSTON, K. A. (1992). Hocus-pocus, the focus isn't strictly on locus: Rotter's Social Learning Theory modified for health. *Cognit. Ther. Res.* 16: 183–199.

WINICK, C. (1962). Maturing out of narcotic addiction. *Bull. Narc.* 14: 1.

THE AUTHOR

Jeffrey A. Schaler, Ph.D., is an adjunct professor in the Department of Justice, Law, and Society at American University's School of Public Affairs in Washington, D.C., and a faculty associate at the Johns Hopkins University in Baltimore, Maryland. He received his doctorate in human development at the University of Maryland and has been in private practice as a psychotherapist since 1973. Dr. Schaler was a president of the Gestalt Institute of Washington, D.C., Inc., and a chairman of the Montgomery County Drug Abuse Advisory Council. He is a third degree black belt in Korean marital arts, enjoys long-distance swimming, and lives with his wife, daughter, and two golden retrievers in Silver Spring, Maryland.