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Recovery From Alcohol or Drug Abuse: The Relationship Between Identity Styles and Recovery Behaviors

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Abstract

The purpose of this study was to explore the relationship between identity styles and recovery from substance abuse. Consistent findings have established a relationship between identity diffusion and substance misuse, but no research has explored the influence of identity styles on recovery processes. Participants ($N = 252$) from treatment and recovery-based facilities and groups using a 12-step recovery model were assessed with the Identity Style Inventory (White, Wampler, & Winn, 1998) and self-report measures of pretreatment addiction, length of continuous abstinence, quality of recovery, and recovery progress. Those with a diffuse/avoidant style had shorter lengths of continuous abstinence, fewer recovery-oriented behaviors, lower quality of recovery, and less recovery progress than those with an information style, suggesting an important relationship between identity styles and the process of recovery from substance abuse.

An individual's use of values, goals, and beliefs to guide their intra- and interindividual functioning reflects their sense of identity. An individual's approach to confronting life issues and resolving life problems is also an important aspect of who he or she is. In contemporary societies alcohol and other drugs are

easily available and therefore present individuals with choices to be made. Drug and alcohol use is common during adolescence, the period when identity issues first come to the forefront for psychosocial resolution (Erikson, 1968). Thus, while facing questions of “Who am I? What do I want to become? Where do I fit in society?” young people are also faced with personal decisions about when, where, and how much they will use alcohol or drugs—or how they will change substance-related behaviors that have subsequently become problematic.

Many people make their first decision to use (or misuse) alcohol or other drugs (AOD) in their youth. A recent study found that, among high school seniors, 73% reported alcohol use, 41% reported illicit drug use, and 37% reported marijuana use during the past year (Johnston, O’Malley, & Bachman, 2000). Of even graver concern is the fact that 6% of high school seniors reported daily marijuana use, 3% reported daily alcohol use, and 30% reported one or more episodes of binge drinking during the past 2 weeks (Johnston et al., 2000). Even with a short history of use, AOD use can increase to the point of being a diagnosable disorder: Using stringent *Diagnostic and Statistical Manual of Medical Disorders (DSM-IV*; 4th ed., American Psychiatric Association, 1994) diagnostic criteria for substance abuse, epidemiological studies of randomly selected high school students documented lifetime prevalence of substance abuse of 8% (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993) and previous years rated as high as 14% of 9th graders and 22% of 12th graders in an at-risk sample (Harrison, Fulkerson, & Beebe, 1998). Other estimates suggest that between 15% and 18% of all Americans will develop a disorder of dependence on alcohol or other drugs during their lifetime (Royce, 1989). When AOD use has reached this point, individuals have typically undergone a change of “drug use identity” from “casual user” to “drug addict” (Castro, Sharp, Harrington, & Walton, 1991).

Why do some individuals become involved in AOD abuse? Empirical studies suggest a complex interplay of factors. Extraintividual factors include peer influences (e.g., Vega, Zimmerman, Warheit, & Apospori, 1993); family influences, including parenting style and involvement (Baumrind, 1991) and parental–sibling substance use (e.g., Windle & Tubman, 1999); and neighborhood contextual variables, including poverty, availability of alcohol and other drugs, embeddedness in crime, and exposure to violence (Herrenkohl et al., 2000). Intraindividual factors are also implicated. Young people may begin using alcohol or drugs through curiosity and experimentation, as an avoidant coping strategy, or as an expression of a negative or antisocial identity. It has also been suggested that individuals use psychoactive substances for reasons that vary according to ego–identity status, and that individuals who lack impulse control and who look outside of self for solutions to current problems are more likely to turn to substance abuse (Marcia, 1993). In one study, those classified in an achievement or moratorium identity status cited curiosity and recreation as motives for using substances, offset by concerns with health risks, whereas those classified as diffuse cited fear of arrest or of parental disapproval as a deterrent (Christopherson, Jones, & Sales, 1988).

Intrapersonal correlates of AOD misuse include psychosocial problems such as a diffuse sense of identity (Jones, 1992; Jones & Hartman, 1988) and the presence of other psychiatric diagnoses (McKay & Weiss, 2001). Regardless of the reasons for an individual's AOD involvement, once substance use has increased to the point of abuse, individuals frequently experience other problems such as job loss, severe disruptions of relationships, or encounters with the criminal justice system due to driving while intoxicated (DWIs), delinquency, crime, or violence. At this point, they are often referred for either voluntary or involuntary treatment for recovery from addiction (Polcin, 2001).

Recovery settings present individuals with imperatives to change their behaviors (e.g., DiClementi, 1993), and most settings have broader goals of fostering the comprehensive changes needed to counteract influences supporting substance use in addicts' lives, including their peer networks, their functioning within the family, and their position in their neighborhood or community context. Such interventions implicitly or explicitly target *identity restructuring* (Kellogg, 1993; Stall & Biernacki, 1986), based on the assumption that, despite the circumstances that may have led to addiction, the individual is capable of choosing their response to these circumstances and can, with support, attain a healthier lifestyle (Grimley, Prochaska, Velicer, Blais, & DiClemente, 1994). In posttreatment interviews, successful recoverers do identify transformations in identity, based on self-discoveries made in treatment, as essential aspects of their recovery (Baker, 2000; Houts, 1995).

Who recovers—and maintains recovery—from substance misuse? Pretreatment psychiatric severity, motivation, and coping skills significantly predict treatment outcome. Additionally, pretreatment psychosocial risk factors have a greater impact on maintaining treatment gains than pretreatment substance abuse problem severity (Latimer, Newcomb, Winters, & Stinchfield, 2000). Performance of prorecovery behaviors and progress during treatment also consistently predict better substance use outcomes (McKay & Weiss, 2001). In general, however, client attribute-treatment interactions are understudied, and little is known about for whom treatment works best (Dunn, Deroo, & Rivara, 2001). Moreover, although many treatment programs target comprehensive personal identity change, very little empirical research has addressed the question of how identity is related to an individual's ability to change negative life patterns and circumstances. The literature on the impact of identity processes on recovery from substance abuse is particularly sparse (Jones, 1992, 1994). The aim of this study was to help close this knowledge gap.

IDENTITY STYLE AS A BASIC PROCESS IN IDENTITY

The concept of identity styles (Berzonsky, 1988, 1989, 1992c) is derived from Erikson's (1963) psychosocial theory of development. Erikson proposed that

young people in the process of constructing a sense of identity explored options and alternatives of who they might be and subsequently made commitments to aspects of the self that they would bring into adulthood. Thus, adolescence is the period in which the individual undertakes the task of the exploration of and commitment to values, goals, and beliefs that will provide the foundation for a mature adult personality. More recently, work has begun to investigate the role of exploration in the emergence of a sense of identity and to articulate more fully its component processes. Berzonsky (1990), for example, focused on the social cognitive processing orientations that he termed *identity styles*. These identity styles, which can be seen as approaches to exploration, are hypothesized to underlie the formation of an identity because they determine how adolescents process self-relevant information, solve problems, and construct and reconstruct their sense of identity (Berzonsky, 1989, 1999). According to this framework, each individual adopts one of three styles as his or her characteristic orientation to making identity-relevant decisions during the process of identity formation.

The most facilitative of these, the *information* style, is characterized by active exploration of alternatives, information seeking, and flexible commitments (Collinger, 1995). Individuals with an information style are reflective explorers. They engage in active searching for alternative solutions to problems. They use the context of past experiences, current values and beliefs, and future goals to make decisions and are willing to examine and revise aspects of their identity when faced with dissonant feedback (Berzonsky, 1990). When describing themselves, individuals with an information style emphasize personal self-attributes, such as “my values” and “my goals.” They are willing to evaluate their views of self and to learn new things about themselves (Berzonsky, 1989; Berzonsky & Sullivan, 1992).

Alternatively, the *normative* style is characterized by attitudes such as deference to authority, and exploration is limited by the tendency to conform to norms and values adopted from key reference groups. These individuals have a high need for closure and a low tolerance for ambiguity, and tend to make inflexible commitments. When describing themselves, individuals with a normative style emphasize collective self-components—“my family,” “my nationality,” and so forth. Adapting to new situations or incorporating new information may be problematic with this change resistant and often rigid self-structure (Berzonsky, 1989; Collinger, 1995).

Last, the *diffuse/avoidant* style is characterized by the avoidance of exploration or exploration that is unsystematic, and the unwillingness to tackle active decision making. Individuals with a diffuse/avoidant style tend to be apathetic and to procrastinate in committing to a set of personal values. Without a coherent set of values, they tend to be “followers” who are hedonistic and impulsive risk takers. Their orientation to the immediate situation allows the demands of the moment to dictate decision making, a process that detracts them from being conscientious about making wise decisions (Collinger, 1995). Diffuse avoidant individuals fo-

cus on social self-elements such as “my reputation” or “the impression I make” (Berzonsky, 1994b; Berzonsky, Macek, & Nurmi, in press). Individuals who rely on this processing orientation tend to possess a fragmented, ad hoc sense of self that needs to be reinforced by external input, such as pleasurable experiences, approval of others, and consumer goods (Berzonsky, 1994a).

IDENTITY STYLE AND ADDICTION RECOVERY

Identity style, then, is the type of social-cognitive strategy that individuals prefer in handling identity-related problems when they arise (Berzonsky, 1990). Individuals who use an information style tend to look within for guidance when solving problems, using values they have acquired from significant, referent others, and modifying them to fit their unique values and beliefs. To do so, they find or create mediational contexts (e.g., social support systems such as friendship networks, church organizations, support groups) conducive to the prevention or resolution of problems and stressors experienced in life (Klohn, Vandewater, & Young, 1996), and engage in them actively.

Although some individuals may overcome substance dependence on their own (Sobell, Ellingstad, & Sobell, 2000), many individuals seek solutions through involvement with group programs, of which Alcoholics Anonymous (AA) is the oldest, largest, and best known. Progress along the 12 steps of recovery advocated by AA is the responsibility of the recovering individual, who must make a serious commitment to accept a life change at each of the steps. Some steps, for example, require the person to admit his or her faults to him or herself and another person and to seek to redress past wrongs. (Such behavior is characteristic of individuals with an information style, but is not characteristic of an individual with a diffuse/avoidant style.) Similarly, each of the steps (e.g., acceptance of a higher power, admitting helplessness, finding support and norms for behavior in a group, etc.) requires the recovering individual to make an increasingly greater investment in positive change and recovery—behavior clearly more consistent with an information rather than a diffuse/avoidant style. Other literature has described the process of recovery from alcoholism as a progression from precontemplation, to contemplation, preparation for action, action, and finally maintenance (Grimley et al., 1994; Prochaska, DiClemente, & Norcross, 1992). Gorski (1986, 1989) identified a similar pattern of recovery from addiction, beginning with the initiation of substance use, to problem use, to the search for help, to recovery (including the probability of relapse as part of the normal process). In these general progressions from addiction to recovery, the individual’s predisposition to use differing types of identity styles is likely to interact with and influence the process of recovery in late adolescents and adults.

Two styles, in particular, may be more consistent with the demands of the recovery process. Specifically, we speculate that individuals predisposed to use a

normative or information style may have an easier time maintaining recovery than those predisposed to a diffuse/avoidant style. For example, it may be that those predisposed to use an information or normative style would attempt to control or eliminate substance abuse as ego-dystonic, “That kind of person is not me,” might be an information style explanation for entering recovery. “That kind of person is not what my parents want me to be” might be a normative style explanation. In fact, in one study examining participants’ length of continuous abstinence following treatment for AOD abuse, the perception of discrepancies between substance use and self-standards was an effective motivator of abstinence (Downey, Rosengren, & Donovan, 2000), offering support for this notion.

Those with a diffuse/avoidant style characterized by procrastination and avoidance, in contrast, would be less likely to successfully assume and sustain the behaviors and attitudes needed for overcoming addiction. The reluctance to face up to problems and take personal responsibility impairs the person with a diffuse/avoidant style (Berzonsky & Ferrari, 1996), and therefore she or he tends to stay “stuck” in problematic patterns of behavior. For example, in one study of women receiving public assistance, those with a diffuse/avoidant identity style had received more than twice as many months of public assistance as did those with a normative or information style (Cheek & Jones, 2001). Already prone to problem behaviors (Jones, 1992, 1994; Jones & Hartmann, 1988; Jones, Ross, & Hartmann, 1992; White & Jones, 1996; White et al., 1998), recovering diffuse/avoidant individuals face a dual challenge—overcoming AOD abuse (a difficult enough challenge) and, in addition, the challenge of changing from a passive, apathetic approach to problem solving and impulsive hedonism to a more mature social-cognitive style needed to maintain a sustained recovery—an equal if not more difficult challenge.

Links between the individual’s preferences for the use of specific types of identity processes (i.e., identity styles) and the process of recovery from substance abuse, therefore, can be reasonably postulated from the existing literature. For example, individuals with a preference for a diffuse/avoidant style would be more likely to experience a difficult recovery process in trying to overcome their problem behaviors than would individuals with an information style.

THIS STUDY

The expected links between the use of an information or normative style and a more positive process of recovery, and between the use of a diffuse/avoidant style and a more negative process of recovery, do not mean that only individuals with a diffuse/avoidant style are likely to have addiction problems and difficulty with recovery. Certainly, individuals who employ any one of the three identity styles are not only capable of engaging in substance use that escalates into abuse and dependence, but also of experiencing problems in recovery (Jones & Hartmann,

1988). Although it has been proposed that substance use is negatively associated with the normative progression of developmental processes, including identity development (Harris, 1983), the precise nature of the relationship between identity styles and either substance abuse and/or recovery from substance abuse has not been empirically established (Jones, 1992, 1994).

Using this as a starting point, the main aim of this study was to extend what is known about the relationship among identity formation processes and recovery from substance abuse. To do so, data were collected on a sample of recovering AOD abusers participating in a variety of recovery programs. Our aim was to collect data broadly representative of the types of programs using 12-step group experiences as a part of the recovery process, approximating the type of substance abuse “treatment-as-usual” regionally available in the study location (Southwestern United States). Twelve-step-oriented treatment programs have been established as effective and efficacious treatment for substance misuse, and are widely implemented (Humphreys & Moos, 2001; Spitz, 2001; Wells, Peterson, Gainey, & Hawkins, 1994). In this study, participants in all programs were administered a questionnaire that included (a) indexes of basic identity formation processes (the three identity styles—information, normative, diffuse/avoidant), (b) indexes of the recovery processes (length of continuous abstinence, recovery behaviors and recovery quality, plus Stepwork), and (c) a six-question index of participant history of substance abuse (as a measure of addiction severity before entering recovery).

The research aim of this study was thus to investigate the relationship of identity formation processes to recovery from substance abuse among recovering addicts while controlling for the differential initial addiction severity (if necessary). Specifically,

- *Study Aim 1 (differential initial addiction severity)* was to evaluate the potentially differential effects of pretreatment addiction severity on identity style during recovery. Specifically, we hypothesized that individuals who used the diffuse/avoidant style would have greater addiction severity before entering recovery than those who used information and normative styles.
- *Study Aim 2 (relations among identity style use and recovery processes)* was to investigate relations between participant’s use of each of the three identity styles and the addiction recovery variables. We tested the hypothesis that there would be a positive and significant relationship between the use of the more adaptive forms of identity style (information and normative) and indexes of successful recovery from substance abuse processes (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress). We also hypothesized that there would be a negative and significant relationship between the use of the maladaptive form of identity style (diffuse/avoidant) and indexes of successful recovery from substance abuse (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress).

- *Study Aim 3 (differences in recovery processes by identity style categories)* was to investigate the difference between individuals classified into one of the three identity styles on our measures of successful recovery processes. Specifically, we tested the hypothesis that individuals classified as favoring the information and normative styles would have significantly more positive scores on the indexes of successful recovery from substance abuse (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress) than individuals who used the diffuse/avoidant style.

METHOD

Participants

Participants ($N = 252$) were recruited from various treatment and recovery settings providing 12-step based recovery programs, including court-ordered ($n = 41$) and voluntary inpatient treatment facilities ($n = 40$), halfway houses ($n = 36$), aftercare groups ($n = 26$), and AA meetings ($n = 109$) in a Southwestern state. All participants admitted drug or alcohol dependence at some point in their lives. Across these subgroups, 24% acknowledged prerecovery rates of regular alcohol use (at least daily), 20% acknowledged regular drug use, and 56% acknowledged regular use of both alcohol and another drug. This heterogeneous sample offered variability in length of and motivation for sobriety and in actual experience with AA, treatment, and education about substance abuse.

Participants included 183 males (72.6%) and 69 females (27.4%) with an average age of 36 ($SD = 12.0$, $range = 17$ to 69). Ethnic populations represented were White (72%), Black (8.4%), Hispanic (18.4%), and other (1.2%). Participants varied by income: 26.8% made less than \$10,000 a year, 32% made between \$10,001 to \$20,000 a year, 23.8% made \$20,001 to \$40,000 a year, and 15.9% made above \$40,000 a year. The average number of years of education/training was 13.6 ($SD = 3.1$, $range = 7$ to 25). Marital status included 25.3% married or remarried, 11.6% cohabiting, 33.7% divorced or separated, and 29.3% never married individuals. Participants had used alcohol or drugs, on average, for 20 years and had problems with them for 12 years prior to recovery. The average length of continuous abstinence was 31 months, but it was skewed to shorter recovery times ($Mdn = 7$ months, $SD = 52.5$, $range = 1$ day to 32 years); 61.7% had less than 1 year of sobriety.

Procedure

The anonymous questionnaire was completed on site, with the exception of AA participants, who completed the packet and mailed it to the first author in a business reply envelope. Over 94% of the on-site participants and 40% of the mail-in participants (AA) who accepted a questionnaire completed and returned it.

Measures

The anonymous questionnaire requested demographic information and included a measure of the identity processes variables, measures of recovery quality variables, a measure targeting history of substance abuse, and a measure of the amount of Stepwork completed. Questions about spirituality were also included and reported elsewhere (White, Wampler, & Fischer, 2001).

ISI-6G

The Identity Style Inventory (ISI-6G; White et al., 1998), a revised version of Berzonsky's (1992b) ISI, was used to (a) calculate both continuous estimates of participants' use of each identity style and (b) classify each participant as utilizing primarily a diffuse/avoidant, normative, or information oriented identity style. The ISI-6G revision was designed to simplify language and sentence structure to approximately a sixth-grade reading level and was deemed more appropriate for the sample than the ISI. Following procedures developed by Berzonsky (1992b), scores for each scale were standardized (based on a z transformation) for the entire sample. The participants' highest of the three normalized scale scores was used to place them in an identity style category. Sample items included "When I talk with someone about a problem, I try to see their point of view" (information), "I like to deal with things the way my parents said I should" (normative), and "I try to avoid problems that make me think" (diffuse/avoidant). On a sample of college students coefficient alphas for the three ISI-6G scales were .78 for the diffuse/avoidant, .64 for the normative, and .59 for the information scale (White et al., 1998). Coefficient alphas for this study (diffuse/avoidant = .66, normative = .54, information = .69) were similar to these as well as to those reported for the original ISI by Berzonsky (1992a) and White and Jones (1996).

Addiction Severity Scale. Severity of addiction was measured with six questions about the participant's history of substance abuse (developed by the authors). These items provided background information related to substance use before entering recovery (e.g., frequency-quantity of alcohol and drug consumption, with possible scores from 0 to 50) and were tallied to produce a total score. The alpha for these six items was .78 ($M = 21.53$; $SD = 9.70$).

Length of continuous abstinence index. The period of time since an individual's *dry date* (the date when alcohol or drugs were last used) was defined as the length of continuous abstinence and was measured in months since last use. Length of continuous abstinence was divided into eight time periods recognized as important in the recovery community, with each successive period reflecting increased time in sobriety. This procedure produced group sizes ranging from 20 (1 to < 2 years) to 47 (6 to < 12 months). The key time periods were identified as (a)

less than 1 month, (b) 1 to less than 3 months, (c) 3 to less than 6 months, (d) 6 to less than 12 months, (e) 1 to less than 2 years, (f) 2 to less than 5 years, (g) 5 to less than 10 years, and (h) 10 or more years of continuous abstinence.

Recovery behaviors scale. Recovery oriented behaviors were assessed with 28 items selected from the Brown–Peterson Recovery Progress Inventory (B–PRPI; Brown & Peterson, 1991). To eliminate overlap between predictor and outcome variables assessing spirituality (not reported here), items referring to spirituality on the B–PRPI were omitted. Seven items utilized a *yes* (4) or *no* (0) format. The remaining 21 items utilized a Likert-type format ranging from 0 (*never*) to 4 (*regularly/daily/always*). A sample *yes–no* item was “I have begun making amends for those I have harmed in my life.” Sample Likert-type questions included “I maintain a regular, well-balanced diet and I treat other people as I would like to be treated.” Higher scores indicated more recovery oriented behavior. Coefficient alpha for the revised B–PRPI scale was .90.

Recovery quality scale. Five items assessed recovery quality. Three of the items examined the degree of compulsion to drink and/or use, the degree of inner peace, and a rating of how others would describe them on a continuum of 0 (e.g., *no peace*) to 100 (e.g., *total sense of peace*). Two additional items (adapted from a study on intergenerational recovery issues; Pidcock & Fischer, 1998) assessed the quality of recovery in terms of personal growth and relationships by using a scale of 1 (*no change*) to 5 (*excellent*). These two items were multiplied by 20 to place them on the same metric as the other three items. Coefficient alpha for the 5 items was .71.

Stepwork progress index. One item identified the total number of AA steps completed. Steps are completed in sequential order. More steps completed are thought by the AA community to represent a more comprehensive recovery.

RESULTS

Descriptive Analyses

Identity style and demographic variables. As a preliminary step, demographic variables were assessed for their associations with the identity style category variables. Chi-square analyses revealed no significant differences in expected versus observed cell distribution of identity styles by gender, ethnicity, or income. However, significant differences were found between expected versus observed cell distribution of identity styles by years of education, $\chi^2(4, N = 248) = 12.80, p < .05$. Persons with an information style were found less frequently than

statistically expected in the less than 12th grade category (6 observed versus 15 expected) and more frequently than expected in the more than 12th grade category (52 versus 41). Persons with a normative style were also found more frequently than expected in the less than 12th grade category (20 versus 15) and less frequently than expected in the more than 12th grade category (34 versus 41). Due to these differences, education was identified as a potential covariate for the remaining analyses.

Main Analyses

Differential initial addiction severity. We first evaluated the hypothesis that individuals who used the diffuse/avoidant style had greater addiction severity before entering recovery than those who used information and normative styles. An analysis of variance (ANOVA) was conducted with the three identity styles as levels of the independent variable and scores on addiction severity as the dependent variable. Contrary to expectations, initial addiction severity did not differ significantly among the three identity styles, $F(2, 241) = 1.96, p = ns, h^2 = .016$. The analysis of covariance with years of education as the covariate was also not significant.

Table 1 presents the correlations between the initial addiction severity index, identity styles, and recovery variables. As seen in Table 1, correlations between the initial addiction severity and all of the identity and recovery variables were nonsignificant (except for Stepwork, $r = .16, p < .05$). This lack of significant findings is consistent with the possibility that a selection effect restricted the range of meaningful variance on the addiction severity variable: At the time they started recovery, all participants had addictions severe enough to warrant entrance into some type of substance abuse program.

TABLE 1

Correlations ($N = 244$) Between Identity Style and Recovery Variables

	1	2	3	4	5	6	7	8
1. Information	—							
2. Normative	.17**	—						
3. Diffuse/Avoidant	-.17**	.18**	—					
4. Addiction Severity	.00	-.10	.05	—				
5. Length of Abstinence	.27**	-.17**	-.20**	.12	—			
6. Recovery Quality	.33**	.08	-.29**	-.05	.51**	—		
7. Recovery Behavior	.32**	.05	-.26**	.09	.57**	.63**	—	
8. Stepwork	.29**	-.15*	-.06	.16*	.68**	.38**	.62**	—

* $p < .05$. ** $p < .01$.

Relations among identity style use and recovery processes. We had hypothesized (a) a positive and significant relationship between the use of the more adaptive forms of identity style (information and normative) and indexes of successful recovery from substance abuse (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress) and (b) a negative and significant relationship between the use of the maladaptive form of identity style (diffuse/avoidant) and indexes of successful recovery from substance abuse (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress).

The correlations between identity and the recovery variables that were used to assess these hypotheses are presented in Table 1. As expected, information scores were positively and significantly correlated with normative scores but negatively and significantly correlated with diffuse/avoidant scores, and significantly and positively correlated with each of the indexes of recovery. Unexpectedly, the results did not support a positive association between normative scores and successful recovery; they tended to support the alternative view, that is, a negative relation between normative style and successful recovery. Scores on the normative scale were negatively and significantly correlated with length of recovery and Stepwork progress, and not significantly predictive of either the recovery behavior or recovery quality variable. In addition, contrary to expectations, normative scores were positively and significantly correlated with diffuse/avoidant scores.

The results of the analyses (Table 1) provide strong support for the hypothesized negative relationship between the use of the maladaptive identity style (diffuse/avoidant) and the indexes of successful recovery. Scores on the diffuse/avoidant scale were significantly and negatively correlated with all indexes of recovery (except Stepwork progress). The high intercorrelation of recovery variables was expected and is consistent with the recovery literature on the interrelationships of various aspects of recovery.

Differences in recovery processes by identity style categories. We tested the hypothesis that individuals classified as using primarily information or normative styles would have significantly more positive scores on the indexes of successful recovery from substance abuse (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress) than individuals classified as primarily using the diffuse/avoidant style. A multivariate analysis of variance (MANOVA) was conducted with the three identity styles (information, normative, diffuse/avoidant) as levels of the independent variable and scores on the recovery variables (recovery length, behavior, and quality plus Stepwork) as the multiple dependent variables, both with and without education as a covariate. Results in the two sets of analyses did not differ; therefore the use of the covariate was dropped from the remaining analyses. The MANOVA yielded a significant multivariate F , $F(10, 474) = 4.84, p < .001$ (Wilks's $\lambda = .82$), $\eta^2 = .093$, justifying tests of the hypothesis at the univariate level.

The results of the follow-up univariate ANOVAs (Table 2), like the correlational results, provide mixed support for the hypothesis that individuals who primarily use the information and normative styles have significantly more positive scores on the indexes of successful recovery than individuals who used the diffuse/avoidant style. Additionally, the results more clearly support the existence of a significant difference between the recovery pattern of those who use an information style and those who use a diffuse/avoidant style than for those who use a normative style. However, the results of the ANOVAs clarified the findings of the correlational analysis. Specifically, there were significant differences between information and diffuse/avoidant scores for all of the recovery variables (length of continuous abstinence, recovery behaviors and quality, and Stepwork progress) and all in the predicted direction, providing strong evidence consistent with the adaptive value of an information identity style. Differences between normative and diffuse/avoidant scores, on the other hand, were significant for only two of the four recovery variables (recovery behaviors and recovery quality), again providing less support for the adaptive value of the normative style. A comparative inspection of the findings of the ANOVA analyses and the correlational analyses, however, indicates that, although the correlations between normative scores and recovery behavior and quality variables were nonsignificant, the univariate tests for these variables (and post hoc tests with Bonferonni adjustment) were significantly less positively associated with the diffuse/avoidant style than both the information and normative styles, which did not differ significantly from each other.

Nevertheless, even thus qualified, the basic pattern of results most clearly supports the existence of a significant difference between the pattern of recovery for the information and diffuse/avoidant styles. The average number of 12 steps completed, for example, was significantly higher for those who used the information style than the diffuse/avoidant style, whereas the number of steps completed by those who used the normative style did not differ significantly from those who

TABLE 2

Means and Standard Deviations ($N = 244$) for Recovery Variables by Identity Style

Identity Style		Addiction Diversity	Length of Abstinence	Recovery Behaviors	Recovery Quality	12 Steps Completed
Information ($n = 73$)	M	22.6	4.9 ^{ab}	2.8 ^c	81.1 ^f	6.6 ^e
	SD	10.7	2.1	.6	11.1	4.3
Normative ($n = 75$)	M	19.6	3.9 ^a	2.7 ^d	79.4 ^g	5.3
	SD	8.9	2.2	.7	15.1	4.7
Diffuse/Avoidant ($n = 96$)	M	21.9	3.5 ^b	2.3 ^{cd}	68.3 ^{fg}	4.7 ^e
	SD	9.2	2.1	.7	17.8	4.5

Note: Means of recovery variables with identical superscripts (vertically) are significantly different ($p < .05$) using the Bonferonni adjustment.

used the diffuse/avoidant style. Moreover, the average length of continuous abstinence was significantly greater for individuals who primarily used the information style ($M=4.90$, ~ 1 year) versus both the normative and diffuse/avoidant styles ($M=3.51$, < 6 months). In contrast, individuals who used the normative style ($M=3.88$, ~ 6 months) did not differ significantly from those using a diffuse/avoidant style.

DISCUSSION

The aim of this study was to extend what is known about the relationships between identity process styles and recovery from AOD abuse. Previous literature investigating the correlates of identity style and AOD abuse (Jones, 1992, 1994; White, 2000) served as the starting point for this study. Previous research has indicated that an individual's type of identity style (particularly diffuse/avoidant) is predictive of AOD addiction (Jones, 1988; Jones, Ross, & Hartman, 1992). However, the precise nature of the relationship between identity process styles and recovery processes among adolescent and adult abusers has not been empirically examined. The findings from this study make a significant contribution toward filling in this knowledge gap. Additionally, our findings address the need to know for whom treatment-as-usual for AOD addiction works best, particularly regarding client attribute-treatment interactions such as the influence of personality variables (in this case, identity styles) on the process of recovery.

Relations Among Identity Styles and Recovery

The results of our analyses provide clear support for the hypothesized positive and significant relationship between the use of an information style and the recovery indexes. Specifically, scores on the information scale were significantly and positively correlated with all indexes of recovery. This finding is not only consistent with the links that have been identified between information style and positive developmental outcomes; it is also consistent with the theoretical articulation of the information style in resembling the characteristics of a mature identity as described by Erikson (1963).

The findings were equally clear regarding the relation between the diffuse/avoidant style and successful recovery. Specifically, like the information scores, scores on the diffuse/avoidant scale were significantly correlated with all of the indexes of recovery (except Stepwork), only in the case of the diffuse/avoidant scale was the direction of the correlation negative. Once again, this finding is not only consistent with the links that have been identified between the diffuse/avoidant style and negative developmental outcomes (Adams et al., 2001; Berzonsky & Kuk, 2000); it is also consistent with the theoretical characterization of individuals who use a diffuse/avoidant style as a "default" for prolonged periods of time—especially into adulthood—as having a tendency to reflect a general apathy or irresolution throughout various dimensions of their life,

including personal problems such as substance abuse (Jones, Ross, & Hartmann, 1992; White & Jones, 1996).

The findings regarding the relation between the normative style and successful recovery, in contrast, failed to support our hypothesis, and instead suggested a negative relation between normative style and successful recovery. Specifically, scores on the normative scale were negatively and significantly correlated with length of recovery and Stepwork and were not significantly predictive of either the recovery behavior or recovery quality variable. This finding suggests that a conformist attitude provides only short-term, limited protection against problems that interfere with recovery. In addition, normative scores were positively correlated with diffuse/avoidant scores.

These findings not only extend findings from the previous (but sparse) literature; they also highlight the need to ensure that theoretical speculation be closely tied to empirical results. That is, although some of our findings were unexpected with respect to the specific research aims of this study, they take on additional significance in view of some of the recent developments taking place in the identity literature. More specifically, the view of the identity styles as constituting a linear and hierarchically organized range of adaptiveness (diffuse/avoidant → normative → information) has been challenged, and some have proposed that both normative and information pathways may, in certain respects, be construed as adaptive (cf. Adams et al., 2001). Testing this hypothesis was clearly not the main aim of this study. Nevertheless, our findings serendipitously support the view that an information identity style is more adaptive in solving a significant life problem than the normative identity style, at least regarding the indexes of successful recovery from addiction used in this study in the population from which the sample was drawn.

The question of why those using the normative style fare less well in recovery also remains open. Other identity style research consistently shows that individuals using a normative style use external reference groups for coping and guidance. At one level, group based recovery contexts such as those included in this study would seem to support normative individuals' recovery (cf. Weisz, 1996). However, other data suggest that external manifestations of spirituality, for example (more characteristic of individuals who use a normative style), are weaker predictors of recovery than internal manifestations (more characteristic of individuals who use an information style; White, Wampler, & Fischer, 1998). These findings, like those reported in this study, cast doubt on the comparative value of a normative style during recovery.

Implications for Further Research

Our results indicate that individuals who used primarily diffuse/avoidant and normative identity styles had shorter average lengths of continuous abstinence (< 6 months or ~ 6 months, respectively) than those who were information in style (~ 1 year). Two possible explanations for this difference are (a) having an information

style moderates recovery, such that individuals with an information style are more likely to endure to having longer continuous periods of abstinence than individuals with other identity styles; or (b) abstinent time in recovery eventually results in greater use of the information identity style and diminishing use of normative or diffuse/avoidant identity styles. We believe that both of these possibilities may be true, given the tendency for those individuals with an information style to use more effective coping and decisional strategies, and given the “identity restructuring” aims of the 12-step recovery process. However, due to the cross-sectional nature of this study, our findings do not allow us to assess the relative likelihood of these two explanations. Nevertheless, they both suggest intriguing hypotheses for future studies of identity-related interventions. It may be that, by engaging in sustained recovery work, individuals increase their use of strategies associated with the information identity style. For example, it seems possible that individuals with initial diffuse/avoidant tendencies would eventually engage in the more cognitively challenging and internally oriented aspects of recovery (e.g., self-examination, reflection) long enough to change their coping and problem solving strategies. In other words, they might develop the inclination to process self-relevant information at an information-oriented level, which might in turn help them sustain abstinence.

Longitudinal research is needed to investigate the possibility of identity transitions or change among individuals in recovery. Although previous research suggests that identity styles are relatively stable among individuals experiencing normal developmental transitions (i.e., college; Adams, 2000), very little research has been conducted in intervention settings in which individual change is an explicit goal. Our data suggest that identity style influences recovery, but it may also be possible that recovery influences identity style, or that a reciprocal and interrelated process of influence exists.

Implications for Interventions and Treatment

Certain choices and behaviors of individuals categorized in each of the three identity styles can be predicted (Berzonsky, 1990) and applied to the recovery process (and were, in fact, suggested by our findings). For example, we speculate that information-oriented individuals seek out, elaborate, and evaluate information relevant to their recovery before making decisions and engaging in behaviors that would lead them away from an internalized objective of sobriety and an improved quality of life. Normative oriented individuals may prematurely accept AA or other group norms without question, substituting group approval of their sobriety for a more effortful self-diagnostic approach to recovery. Individuals who maintain a diffuse/avoidant style are likely at risk for detrimental procrastination that would promote impulsive, hedonistic-driven decisions and behaviors potentially disastrous for successful recovery.

Self-reports of former addicts achieving long term recovery describe a lengthy struggle to abandon attitudes and behaviors consistent with a diffuse/avoidant

style and movement toward attitudes and behaviors consistent with a more resolved, mature identity (AA World Services, 1976). Additional research is needed to further our understanding of how identity styles mediate recovery from problem behavior. Longitudinal studies tracking the identity styles of individuals in the process of recovery (or relapse) could pinpoint processes that are helpful for renewing or restructuring identity in adaptive ways.

Because previous studies have shown that the influence of family context in identity development is extremely important (Adams, 1985; Grotevant & Cooper, 1985; Papini, 1994), the degree to which family of origin or family of choice supports identity-related changes throughout the recovery process may help or hinder progress. For example, a family with many normative values may continue rejecting the addict even in recovery; a family with diffuse/avoidant members may increase the risk of relapse because of their hedonistic approaches to life and/or their own substance involvement. In such cases, prevention/intervention efforts outside the family (e.g., in the form of a mentor or an AA sponsor) may provide the individual with (a) a prosocial set of values, goals, and beliefs; (b) insight into available life options (along with “how” and “why” the addict might want to consider them); (c) restorative experience with developmentally antecedent identity elements (e.g., trust and fidelity in regard to self and others); and (d) “support in rebuilding of those most vital ego functions, which—as far as he ever built them—he has relinquished” (Erikson, 1956/1980, p. 149).

Interventions that support positive identity development have been advocated, particularly for those experiencing identity-related problems (Archer, 1994; Jones, 1994; Marcia, 1989). Although evidence indicating the potential of identity-facilitating interventions exists (Ferrer-Wreder et al., 2002), research is needed to determine whether interventions can invoke actual identity restructuring or change of identity styles in the context of recovery. Nevertheless, finding ways to promote movement out of a diffuse/avoidant style toward a more information style provides prevention-intervention specialists with a theoretically based and empirically suggested starting point. Interventions tailored for recovering individuals who utilize the other two identity styles are also needed. Although persons with an information or normative style fared better in this study, each must still work through the recovery process, and each may benefit from intervention efforts that include a psychosocial emphasis. Such efforts should begin early in recovery, at a time when individuals are at greatest risk for relapse and should encourage movement into socially accepted, healthy forms of exploration and decision making that are associated with more adaptive forms of identity processing.

Study Limitations

Several aspects of this study suggest cautious interpretation of the findings. First, contrary to our expectations, the frequency and duration of prior addictive behaviors (addiction severity) did not differ by current identity style. As discussed in an

earlier section of this article, it is likely that selection effects for the sample restricted the possibility for meaningful variation on this variable. Additionally, the generalizability of the study may be limited by the sample characteristics (individuals involved in 12-step based treatment, aftercare groups, AA groups, and half-way houses from one Southwestern state). Nevertheless, as previously discussed, such recovery support venues constitute a major percentage of treatment-as-usual settings available in most regions; thus we have no reason to believe that the results of our study were idiosyncratic. However, due to the relative homogeneity of our sample with respect to ethnic or cultural differences, we could not assess our hypotheses with respect to influences from these factors, and it remains for future research to do so.

Furthermore, the validity of our results may also be limited by the reliance on self-report measures that could, in future studies, be enhanced by reports from significant others, treatment staff, or other group members. The cross-sectional nature of the data also precluded questions that could be asked regarding the influence of identity styles throughout the recovery process. Time related variables such as maturation, cohort change, changes in social support over time, and other potentially influential mediators of recovery could not be assessed. Despite these limitations, results of this study indicate robust associations of identity styles with the AOD addiction recovery processes that are worthy of consideration and follow-up investigations.

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