



Special article

What does recovery mean to you? Lessons from the recovery experience for research and practice

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Abstract

Recovery is a ubiquitous concept but remains poorly understood and ill defined, hindering the development of assessment tools necessary to evaluate treatment effectiveness. This study examines recovery definitions and experiences among persons who self-identify as “in recovery.” Two questions are addressed: (a) Does recovery require total abstinence from all drugs and alcohol? (b) Is recovery defined solely in terms of substance use or does it extend to other areas of functioning as well? Inner-city residents with resolved dependence to crack or heroin were interviewed yearly three times ($N = 289$). Most defined recovery as total abstinence. However, recovery goes well beyond abstinence; it is experienced as a bountiful “new life,” an ongoing process of growth, self-change, and reclaiming the self. Implications for clinical and assessment practice are discussed, including the need to effect paradigmatic shifts from pathology to wellness and from acute to continuing models. © 2007 Elsevier Inc. All rights reserved.

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1. Introduction

Recovery, a concept once associated almost exclusively with 12-step fellowships such as Alcoholics Anonymous (AA), has become all but a buzzword in government agencies. This includes the National Institute on Alcohol Abuse and Alcoholism renaming its Division of Treatment to Division of Treatment and Recovery Research, the White House’s 2003 Access to Recovery program, the Center for Substance Abuse Treatment’s Recovery Community Support Program, the Substance Abuse and Mental Health Services Administration’s Recovery Month, and state Offices of Alcoholism and Substance Abuse Services’ inclusion of

Recovery Services on their web sites (e.g., New York State). There is also a growing grassroots movement of organizations such as Faces and Voices of Recovery and virtual communities (e.g., www.werecover.org).

As recovery increases in popularity, there remains no consensus on what “recovery” means. This is a problem for several reasons. First, treatment services are expected to foster recovery and researchers to evaluate treatment’s effectiveness in reaching that goal; the goal must be strictly and explicitly defined, and there must be a consensus among the various stakeholders (policymakers, funding sources, the general public, helping professionals, and clients of services). The lack of a clear definition of recovery hinders both clinical practice and research in our field; it also contributes to the variability in reported outcomes of addiction treatment (Maddux & Desmond, 1986; see later discussion). Second, substance abuse (alcohol and other drugs) is a much publicized and highly stigmatized condition in the United States. Stigma leads to discrimination that may thwart efforts at self-improvement such as securing employment or housing. Recovery is a reality for many, although

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there is no available estimate of the number of individuals who are “in recovery” (in contrast to the wealth of available data on active substance use); this alone is a telling sign of where recovery “stands” and may be due, in part, to the absence of a clear definition. The face of individuals in recovery is still too often that of dysfunctional characters in the mass media. Terms such as *addiction*, *abuse*, and *dependence* connote loss of self-control that contributes to stigma. A critical way to overcome the stigma of substance use disorder (SUD) is to convey the message that recovery is a reality; this can give hope to affected individuals and to their family, inform the general public, and provide realistic expectations (a goal) for stakeholders. Conveying this message is hindered by the absence of shared definition of recovery. The primary purpose of this article is to examine definitions and experiences of recovery to inform the development of a consensual definition. First, public perceptions, media messages, and addiction professionals’ practices are briefly reviewed; then, data are presented on how persons self-identified as in recovery—a critical yet most often neglected group of stakeholders in this debate—define the term. Implications for clinical and research practice are derived and future directions are discussed in closing.

1.1. Public perceptions of recovery

Little is known about perceptions of recovery per se; most studies have examined the public’s views of alcohol and drug use and misuse. The first (and, to date, only) public survey on recovery-related issues found that 39% of those polled knew someone (a family member, a close friend, or both) who is in recovery from addiction to alcohol or other drugs (Peter D. Hart Research Associates, 2004). When asked what definition best matches their understanding of someone “in recovery from addiction to alcohol or other drugs,” more than half (62%) said that it means the person is currently trying to stop using alcohol or illicit drugs. Only 22% said that the person in recovery is free from the disease of addiction and no longer using alcohol or illicit drugs. Even those who know someone in recovery overwhelmingly believe that someone in recovery is “trying to stop using alcohol or drugs.” Consistent with this view of recovery as an attempt to overcome drug abuse, alcohol abuse, or both, one third only agreed that “the majority of those who seek treatment for addiction to alcohol or drugs achieve life-long recovery”; 50% disagreed and 19% were unsure. Most recently, in an August 2006 USA Today/HBO Family Drug Addiction poll, 76% of Americans who have family members affected by SUD problems believed that addiction is a disease; most were optimistic that their loved ones will recover, but about half said recovery is possible only with professional help (USA Today/HBO, 2006). These results mirror those of other surveys generally indicating that the public perceives addiction as difficult to overcome, requiring multiple attempts and treatment episodes (e.g., Harvard

School of Public Health & Robert Wood Johnson Foundation, 2000). The increasing acceptance of the chronic disease view of addiction by the general public is a welcome change from the view of addiction as a moral weakness or a bad choice (e.g., Schomerus, Matschinger, & Angermeyer, 2006). However, the connotation of chronicity carries the danger that addiction remains viewed as a permanent scar on the once-dependent individual, and discrimination can result lest the message of recovery is disseminated more widely.

1.2. Media messages about recovery

The mass media have become a primary source of information on key social topics for many. One half of households surveyed in 2005 reported getting most of their information about drugs and addiction from the media (Schulman, Ronca, & Bucuvalas, Inc., 2005). Thus, the media can play a critical role in shaping the public’s view of SUD and of recovery. Media portrayals of recovery are plentiful and generally focus on the ongoing struggles of public figures with multiple relapses and rehabilitation episodes. Information on addiction and recovery for the general public also comes from federal agencies’ educational campaigns that are likely to be less “visible” to the public than are sensational news stories but are nonetheless worth examining. For example, the U.S. Department of Labor’s web site features “Workers in recovery,” with several pages devoted to informing prospective employers about what to expect from workers in recovery, including a systematic effort at addressing common misconceptions (U.S. Department of Labor, Office of the Assistant Secretary for Policy, 2007). Like virtually every article and public message on recovery, it does not specifically define the term but states: “Individuals who have participated and completed treatment programs are considered to be in recovery.” It goes on to note, “Treatment and recovery are interconnected, but not the same.” Finally, with respect to “Is abstinence/sobriety the same as recovery?” it states “No. Sobriety or abstinence is simply refraining from the ingestion of alcohol or other drugs. Recovery is the process by which the ingestion of alcohol or other drugs is recognized as problematic and avoided.”

The recovery community has a unique stake in informing the public; efforts in this area have increased with the growth of grassroots organizations such as *Faces and Voices of Recovery* (2007). Web sites offer a wealth of information about the recovery community, recovery resources, events, and advocacy efforts. It implicitly recognizes the lack of clarity about what recovery means; *Faces and Voices of Recovery* (2007) provides the following messaging on language for a person in recovery: “I’m (your name) and I am in long-term recovery, which means that I have not used (insert alcohol or drugs or the name of the drugs that you used) for more than (insert the number of years that you are in recovery) years.” Overall, available media messages about

recovery appear to define the term strictly in terms of substance use and, specifically, as total abstinence.

1.3. Addiction professionals' definitions of recovery

Parallel with the growing popularity of recovery in federal agencies, the term is gaining grounds among researchers, judging from the titles of recently published scientific articles in peer-reviewed journals. Unlike the media and other segments of society, science has a unique need for defining key terms. Researchers' definitions are clearest in the operationalization of key constructs described in an article's Measures section. An informal review of peer-reviewed articles published in the past 5 years that contain the term *recovery* in the title suggests that despite calls for a broader conceptualization of the treatment outcome (McLellan, McKay, Forman, Cacciola, & Kemp, 2005; see later discussion), most researchers implicitly define recovery in terms of substance use (e.g., Cisler, Kowalchuk, Saunders, Zweben, & Trinh, 2005) and most often as abstinence—either total abstinence from alcohol and all other drugs or abstinence from the substance under study (e.g., Burman, 1997; Flynn, Joe, Broome, Simpson, & Brown, 2003; Granfield & Cloud, 2001; Scott, Foss, & Dennis, 2005). In the recent crop of recovery articles, several terms are used, seemingly interchangeably—*remission*, *resolution*, *abstinence*, and *recovery*, as are the verbs *overcome*, *quit*, and *recover*. Determining what authors mean by recovery often does not become clear until the Methods section. There, recovery typically vanishes, to be replaced without explanation by “abstinence” (e.g., Fiorentine & Hillhouse, 2001). A few authors define recovery in terms of *Diagnostic and Statistical Manual of Mental Disorders (DSM)* criteria (American Psychiatric Association, 1994); for instance, one study defines years of intervening recovery “as the sum of all the yearly intervals during which alcohol use disorder diagnosis was not present” (McAweeney, Zucker, Fitzgerald, Puttler, & Wong, 2005, p. 223; also see Dawson et al., 2005). Lest all these highly skilled scientists be deemed careless for using one term (recovery) to mean another (abstinence)—including the present author in past articles, this practice likely stems in part from the pervasive influence of abstinence-based 12-step recovery principles on treatment practices in the United States and from the prevalent pathology-focused paradigm (see later discussion). The emphasis on abstinence is also consistent with the American Society of Addiction Medicine's definition of recovery as “overcoming both physical and psychological dependence to a psychoactive drug while making a commitment to sobriety” (American Society of Addiction Medicine, 2001).

1.4. Study objectives

Thus, what does recovery mean? Is it total abstinence? Is recovery strictly a question of substance use or is there more to it than that? To date, empirical work on recovery has

adopted definitions imposed by researchers and few have sought to inform their definition with the lived experience of individuals with a history of substance use. Several researchers have noted the need for definition, additional research, and clarification in investigating recovery (e.g., Kubicek, Morgan, & Morrison, 2002; Morgan, 1995). This study is a first step in that direction. Combining quantitative and qualitative data from a prospective investigation of predictors of long-term remission, we address two primary research questions: (a) Does recovery require total abstinence from all drugs and alcohol? and (b) Is recovery defined solely in terms of substance use or does it extend to other areas of functioning as well?

2. Materials and methods

2.1. Recruiting procedure and sample

Recruiting was conducted in New York City through media advertisements placed in free newspapers and flyers posted throughout the community over a 1-year period starting in March 2003. In an effort to recruit individuals representative of various recovery “paths,” the recruiting materials did not use the word *recovery* as we felt that it may result in natural exclusion of individuals who did not affiliate with 12-step groups.¹

The study maintained a toll-free telephone number. Callers were screened briefly (10–12 minutes). Information was collected on basic demographics, past and current drug use, lifetime dependence severity (using the Drug Abuse Screening Test; Skinner, 1982), current utilization of treatment services and of 12-step meetings, and contact information. Eligibility criteria for the study were as follows: (a) fulfilling the *DSM-IV* criteria for abuse or dependence of any illicit drug (American Psychiatric Association, 1994) for at least 1 year in one's lifetime, but not in the past month; (b) self-reported abstinence from illicit drugs for at least 1 month, and (c) not being enrolled in residential treatment.² Eligible callers were contacted within a week to schedule an in-person interview. Seven hundred two unduplicated screenings were conducted; of those, 440 were eligible; 354 were interviewed (81% of eligibles). (The following were the reasons why 86 eligibles were not interviewed: they were unable to contact with information given during screening, e.g., had a disconnected telephone line [$n = 39$]; they did not show up for their appointment and were unable

¹ The following is a sample text of a recruiting ad: “Have you successfully overcome a drug problem? NDRI is interested in interviewing anyone in NYC who used to have a serious problem with drugs and is no longer using. Your experiences can provide valuable information to help people with similar problems. Confidentiality is strictly maintained. Participants compensated for time. We do not provide treatment. Call Pathways toll free (800) xxx-xxxx.”

² This study is a naturalistic investigation of the role of psychosocial factors on long-term recovery; we wanted to be able to assess the role of baseline community-related factors on subsequent outcome.

to contact to reschedule [$n = 19$]; they refused [$n = 10$]; they relapsed between screening and scheduling call [$n = 6$]; data collection ended [$n = 12$].)

The study was reviewed and approved by the author's Institutional Review Board, and we obtained a certificate of confidentiality from the funding agency. In-person interviews were conducted at yearly intervals. Data were collected using interviewer-administered computer-assisted software and recorded on laptops. The baseline (BL) interview session started by administering the informed consent procedure: The study goals, participation requirements, and interview schedule were explained including the voluntary nature of the study and the right to withdraw from participation and to refuse to answer specific items; prospective participants' questions were answered, and agreeing individuals signed the informed consent form. The BL interview lasted an average of 2 1/2 hours; the 1- and 2-year follow-ups (F1 and F2, respectively) omitted the background and historical information. Participants received US\$30, US\$40, and US\$50 to compensate them for their time at BL, F1, and F2, respectively. We contacted participants by mail quarterly to maintain updated locator information and to thank them for their continued participation in the project; each mailing includes a small gift—typically a US\$5 gift card redeemable at local businesses (e.g., fast food, video rental). Of the 354 participants, 9 had died and 1 reported having never used an illicit drug and was excluded from the study, and BL data were lost for 2 participants, resulting in a working BL cohort of 342 individuals. We conducted 317 F1 interviews on average (mean) 379 days after BL ($SD = 45$ days) and 308 F2 interviews at a mean of 361 days after F1 ($SD = 73$ days), representing retention rates of 92.6% and 90% of the surviving cohort at F1 and F2, respectively; the sample for this study consists of the 289 individuals from whom we obtained both F1 and F2 data (84.5% of surviving BL cohort).

In addition to the quantitative data from which most of the present findings emanate, we also conducted qualitative life history interviews with an additional 50 participants who were recruited as described above and reinterviewed once (F1). The qualitative interviews were audio recorded, transcribed, and analyzed using Atlas TI by a trained researcher in collaboration with the author.

2.2. Measures

In addition to sociodemographics and background collected at BL, we collect information yearly about substance use, participation in substance abuse treatment, 12-step and other recovery-oriented mutual aid organizations, and specific recovery-related experiences and beliefs, as described below (the last one being collected at the follow-up interviews only). The semistructured interview combines quantitative and qualitative data collection; quantitative items (e.g., forced choice) allow us to compare

participants on specific answer categories across other dimensions and over time (e.g., history of formal and informal help utilization); open-ended questions yield rich information about participants' recovery experience in their own words. Open-ended items were developed by the author from the proceedings of a pilot study (Laudet, Savage, & Mahmood, 2002), from a review of the literature, and from focus groups conducted as part of instrument development prior to fielding the project.

2.2.1. Substance use and mental health

Dependence severity: We used the Nonalcohol Psychoactive Substance Use Disorders subscale of the Mini International Neuropsychiatric Interview (MINI), a short, structured diagnostic interview developed in the United States and Europe for *DSM-IV* and *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10)* psychiatric disorders (Sheehan et al., 1998)—the lifetime version at BL and the past-year version at each follow-up. The MINI is a structured psychiatric interview that has been validated against the much longer Structured Clinical Interview for *DSM* diagnoses in English and French and against the Composite International Diagnostic Interview for *ICD-10*. The lifetime and past-year versions consist of 14 items answered in a yes/no format that yield a single score ranging from 0 to 14. The following is a sample item: "When you were using [primary substance], did you ever find that you needed to use more [primary substance] to get the same effect that you did when you first started taking it?" Cronbach's $\alpha = .81$ at BL.

Length of abstinence at BL: Drug and alcohol use history was collected using a list of 13 substances included in the Addiction Severity Index (McLellan et al., 1992). For each substance "ever" used once or more, participants provided the last date of use. A variable was computed for abstinence length from each substance ever used; the duration of abstinence length used in the study represents time (in months) since most recent use of any of the illicit drug ever used (i.e., if a participant last used heroin 4 years ago and crack 5 months ago, abstinence length is 5 months). We initially planned on including alcohol in the computations; length of abstinence from alcohol was consistently longer than that from illicit drugs (i.e., participants had used drugs more recently than they had used alcohol) at each data collection follow-up.

Remission status at follow-ups: At each interview, participants were asked about substance use since the previous interviews as described above. From these data, we computed a dichotomous variable at each follow-up: sustained remission (yes/no) corresponding to whether participants had used any drugs since the previous interview (i.e., in the past year); we also computed a variable to represent sustained remission from BL to F2 (i.e., more than 2 years). Saliva samples were collected to corroborate self-reported substance use: The samples were tested for cocaine, opiates, THC, and methamphetamine. The laboratory reports

results (positive or negative) for each substance, and we compute a summary variable (positive/negative for any of the four substances). Samples are collected as part of every interview, but for budgetary reasons, samples are analyzed only for participants who report no substance use since the last interview (neither participants nor field staff were told this during data collection so as to minimize bias in self-report and data collection) because underreporting is typically more prevalent in this population than is overreporting.

Remission stage: Four time-linked benchmark “stages” were used: under 6 months of abstinence at BL (28%), 6 to under 18 months (26%), 18 to 36 months (20%), and more than 3 years (26%). Similar stages were computed at F1. These stages were selected for several reasons. One of the goals of the study from which this data set is drawn is to determine whether factors that promote and hinder sustained SUD remission change as a function of length of abstinence; we needed to identify discreet remission stages that coincide with remission “landmarks” both clinically and phenomenologically; we reviewed the extant literature and conducted focus groups with persons in recovery for various lengths of time prior to commencing the analyses, and we determined that these four stages had clinical relevance. In this data set, they also afforded four groups of relatively equal size at BL, which is statistically desirable.

Mental health history: Participants were asked at BL if (a) they ever received treatment for a mental health problem, (b) they were ever diagnosed with a mental health disorder, and if yes, (c) what the diagnosis (diagnoses) is (are).

2.2.2. Treatment and 12-step utilization

Treatment utilization: Data on prior and current participation in any of the following addiction treatment services were obtained: detoxification (drug or alcohol), methadone maintenance, therapeutic community, 21-/28-day inpatient rehabilitation, outpatient treatment or day treatment, treatment in jail or prison (alcohol or drugs), any other (recorded verbatim and coded as described above). This study uses a summary variable computed at each time point: ever received addiction treatment in any of these modalities at BL and in the past year at F1 and F2 (yes/no).

Twelve-step participation: Attendance at AA, Narcotics Anonymous (NA), and Cocaine Anonymous (CA) meetings was assessed separately: ever at BL and past year at F1 and F2 (yes/no). A summary variable was created at each time point: ever participated in any 12-step addiction recovery (AA, NA, or CA) at BL and in the past year at F1 and F2 (yes/no).

2.2.3. Recovery

Self-reported recovery status: Participants were asked the following question: Do you consider yourself in recovery? (yes/no).

Length of recovery: Participants answering “yes” to “in recovery” were asked the following: How long have you been in recovery?

The measures described below were obtained from all participants at F1 and F2, regardless of self-described recovery status.

Recovery definition: (a) Structured (forced choice) item: Which of the following statements most closely correspond to your personal definition of recovery? Answer categories: moderate/controlled use of any drug and alcohol, no use of drug of choice/some use of other drugs and alcohol, no use of any drug (including pot) and some use of alcohol, and no use of any drug or alcohol; (b) Open-ended item: “How would you define recovery from drug and alcohol use?”

Recovery goals: What are your personal goals right now in regard to drug and alcohol use? Answer categories are the same as in the recovery definition described above. We asked this item because we wanted to determine whether personal goals were similar to or different from the definition of recovery.

Benefits of recovery: The following open-ended question was asked: “What, if anything, is/would be good about being in recovery?”

Recovery belief: The instrument included the Addiction Belief Inventory (Luke, Ribisi, Walton, & Davidson, 2002). One item from the instrument is used in this study, “Recovery is a continuous process that never ends” (answer categories: *strongly disagree, disagree, agree, and strongly agree*).

2.3. Overview of analyses

Before addressing the study question, we conducted analyses to compare participants included in the analyses ($N = 289$) with those who survived and who were not reinterviewed at both F1 and F2 ($n = 53$) on key individual-level variables previously associated with substance use outcomes: age, gender, race/ethnicity, primary substance, BL length of recovery, and lifetime addiction severity. Differences were assessed using chi-square for categorical variables and t tests for continuous measures. The study questions were addressed using descriptive analyses. We were interested in finding out whether how recovery is defined differs according to individual and clinical characteristics associated with substance use outcomes and utilization of recovery resources (formal treatment and 12-step fellowships): gender, age and race, mental health history, primary substance, lifetime addiction severity, substance use status, remission stage, and history of formal treatment and of 12-step participation. Chi-square and t tests were used to conduct these subgroup comparisons.

Codes for the qualitative answers to the open-ended items in the semistructured instrument were developed on the first 30 completed interviews of each data collection wave; based on a subsample of 25 instruments coded by two independent researchers (the author and a trained clinician who has been collaborating with the author on several similar prior studies), interrater reliability ranges from .90 to .94 (for BL and 1- and 2-year follow-ups, respectively); up to four answers were coded for each question.

2.4. Attrition analysis

Three differences emerged: Participants retained at both follow-ups were significantly more likely ($p < .05$) (a) to be older by 3 years at BL ($M = 43$ years vs. 39.8 years); (b) to have longer abstinence (32 months vs. 13 months), and to be more specific, they were more likely to have 6 months or longer length of abstinence at BL; and (c) to be African American (86.5% vs. 77.1%, $\chi^2 = 5.1$).

3. Results

3.1. Sample descriptives

Key sample characteristics are presented in Table 1. The sample consisted largely of ethnic minority members and ranged in age from 19 to 65 years ($M = 43$ years, $SD = 7.8$). Educational attainment ranged from 5 to 18 years of schooling ($M = 12$ years, $SD = 2$). At recruitment, 20% were employed part-time and 22% were employed full-time; 60% cited government or other benefits (e.g., Veteran's pension) as primary source of income; 34.5% cited a job on or off the books. More than half (56%) were single, 16% were married, and 28% were widowed, separated, or divorced. One quarter (24%) reported being HIV+, and 30.8% reported being HCV+. Four out of 10 (41.8%) had been treated for a mental health problem at some point in their life, and 38.8% had been diagnosed with a mental health disorder; among those "ever" diagnosed, most frequent diagnoses were depression (56%), bipolar disorder (21%), and anxiety disorder (17.8%). Most (84.4%) had no involvement with the criminal justice system at entry in the study; 13% were on probation or parole.

3.2. Substance use history and status at follow-ups

Lifetime dependence severity was high, with a mean score of 11.7 ($SD = 2.4$; out of a maximum score of 14). Most participants were polysubstance users. The most frequent primary problem substance was crack (59.2%), followed by heroin (17.0%). Regular drug use (once a week or more) had lasted, on average, 18.7 years ($SD = 12$ years). Abstinence length at BL ranged from 1 month to more than 10 years ($M = 30.8$ months, $Mdn = 15.7$ months, $SD = 42$ months).

Two thirds of participants (66.2%) had not used drugs in the year between BL and F1; 68.5% had not used drugs since F1 at F2; 58.4% reported no use in the 2 years between BL and F2. There was 86.2% concordance between self-reported drug use and biological samples at F2. Abstinence length at BL was significantly associated with greater likelihood of sustained abstinence at F1, at F2, and over the 2 years between BL and F2: Mean length of abstinence at BL among participants who remained

Table 1

Recovery defined as total abstinence from all drugs and alcohol as a function of individual background and clinical characteristics

Characteristics	<i>n</i> ^a	Percentage of the total sample	Percentage of those endorsing total abstinence
Total sample	289	100	86.5
Gender			
Men	157	54.3	86.5
Women	132	45.7	86.4
Age (years)			
<40	93	32.2	81.4
40 to <50	138	47.8	89.9
50+	58	20.1	86.9
African American vs. others*	184	64.1	89.7
Hispanic ethnicity (vs. non-Hispanics)	50	17.3	89.8
"Ever" had mental health treatment			
Yes	122	42.2	85.4
No	167	57.8	87.3
Primary substance			
Alcohol	23	8.1	91.8
Heroin	49	17.0	85.2
Crack	171	59.2	88.5
Cocaine	28	9.7	86.7
Other**	15	5.2	60.0
Substance use for the past year***			
Did not use	191	66.2	90.8
Used	98	33.8	78.8
Remission stage at F1			
<6 months**	85	29.9	77.6
6–18 months	35	12.3	80.0
18–36 months	48	16.6	87.5
>3 years**	116	40.8	94.0
Considers self in recovery			
Yes	224	78.9	87.0
No	60	21.1	84.4
Twelve-step history***			
"Ever" participated	257	88.9	88.9
Never participated	32	11.1	65.6
Treatment history***			
"Ever" had treatment	248	85.8	89.5
Never had treatment	41	14.1	68.8
Help history (treatment and/or 12-step fellowships)**			
Yes	269	93.4	88.1
No ("natural recovery")	19	6.6	65.4

^a The sum of some subgroups is smaller than the total sample due to missing data on individual variables.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

abstinent at F1 was 3 1/2 years (40.8 months), as compared to 15 months for those who reported substance use between BL and F1 ($F = 23.67$, $p < .001$). Participants who reported substance use at F2 had a mean of 10 months of abstinence at F1, as compared to more than 4 years (52 months) among those who reported no substance use between F1 and F2 ($F = 63.09$, $p < .001$). A similar pattern of result emerged with respect to difference between participants who did and did not sustain abstinence for the full 2 years between BL and F2.

Individuals who had never received treatment or participated in 12-step fellowships did not differ from other participants in terms of substance use outcomes at either F1 or F2.

3.3. Treatment and 12-step exposure

Most had received treatment (85.8%) and participated in 12-step fellowships (88.9%); 6.4% had not participated in either treatment or 12-step fellowships at BL ($n = 18$ at F2); these individuals reported significantly lower lifetime addiction severity ($M = 9.95$ on the MINI vs. 11.81 among those with treatment or 12-step history; $F = 11.85$, $p < .001$).

3.4. Recovery experiences

3.4.1. Recovery status and association with substance use status

At F1, 78.9% considered themselves in recovery, and at F2, the figure was 78.2%. Length of recovery at F1 among participants self-identified as in recovery ranged from under 1 month to 27 years ($M = 47.5$ months, $SD = 46.1$); length of abstinence in this group ranged from none to 24.2 years ($M = 38.2$ months, $SD = 44.6$). At F2, length of recovery among those who self-identified as in recovery ranged from none to 26 years ($M = 58.9$ months, $SD = 52.6$), whereas length of abstinence averaged 45.7 months ($SD = 47.5$ months). Most participants who had not used drugs in the previous year at F1 considered themselves in recovery (91.7%), as compared with 55.5% of those who had used since BL ($\chi^2 = 56.3$, $p = .000$); at F2, 94% of past-year abstainers considered themselves in recovery compared to 42.2% of past-year users. Thus, overall, nearly all individuals who had not used in the past year considered themselves in recovery, but a substantial percentage of those who had used in the past year (up to half) considered themselves in recovery as well.

The bivariate association between length of recovery and abstinence length was highly significant at both F1 and F2 ($r = .78$, $p < .001$ and $r = .66$, $p < .001$ at F1 and F2, respectively). We compared total length of abstinence and length of recovery. At F1, mean abstinence length among those in recovery was 43 months versus 19.8 among those not in recovery ($F = 28.8$, $p = .000$); at F2, persons in recovery had last used, on average, 54.7 months ago versus 14.5 for those not in recovery ($F = 41.7$, $p = .000$). We further examined time since last use among past-year users who considered themselves in recovery ($n = 58$ at F1): Time since last use ranged from none to 11 months, averaging 84 days ($SD = 96$ days); 41.4% reported having used in the past month. Taken together, these findings suggest that among persons who are still using drugs, recovery and abstinence are related but distinct concepts; one may still be using (perhaps with the intention of stopping) and consider oneself in recovery.

3.4.2. Recovery definition and goals

In the forced-choice item, 86.5% endorsed total abstinence from all drugs and alcohol as their definition of recovery at F1, and 83% endorsed total abstinence as their recovery goals. At F2, 84.9% endorsed total abstinence as both their goals and definition of recovery. Because findings on recovery goals are essentially similar to those on recovery definition, the remainder of this section presents only findings on recovery definition; it is useful to note that the two concepts appear to be highly similar. Forty individuals (14%) changed their recovery definition between F1 and F2 on the forced-choice item: 46% of those ($n = 18$; 6.3% of the F2 sample) went from recovery is moderation at F1 to total abstinence at F2, and 54% ($n = 22$, 7.7% of the F2 sample) changed in the opposite direction. The small size of these subgroups precluded exploring these trends further.

In the open-ended definition of recovery, 44.3% of respondents provided an answer bearing directly on substance use: 40.3% defined recovery as abstinence, and 4% said “controlled use.” Many of those who defined recovery as abstinence went on to express the idea that using any mood-altering substance would lead back to full-blown relapse.

No, you can't take no occasional anything. It's not gonna be an occasional anything, because like I said, in your life, whatever drug it is, your choice of drugs, if you like it, you like it. OK? And that more than anything is gonna lead to another and another and another. OK? [African American female; 5 years abstinent from heroin use].

The answer categories that did not bear on substance use included, in descending order, the following: a new life (22%), well-being (13%), a process of working on yourself (11.2%), living life on life's terms (accepting what comes—9.6%), self-improvement (9%), learning to live drug free (8.3%), recognition of the problem (5.4%), and getting help (5.1%). (Answers add up to more than 100% because up to four answers were coded for each participant.) A recurrent theme was that recovery is going back, regaining an identity (a self) lost to addiction:

I'm in recovery myself because I want to stay clean. And I want to be a responsible person or responsible human being. To do what I was ... what I should do or what God put me here to do. And, you know, I got to—I got to remain sober to do these things.

To me recovery means getting back what I lost. Myself. I am not talking about materialistic things. I am talking about me.

Recovery, I just ... What is it for me? It's going back to me. Being reintroduced to [respondent's name] That's what it is for me. Because [respondent's name] started out. I was never born with a drug or drink in my mouth, you know.

My definition of recovery is life. Cause I didn't have no life before I got into recovery.

Qualitative data on recovery definitions provided by the 20.4% of individuals who did not consider themselves in recovery at F1 are particularly noteworthy as they echo some

of the popular connotations the term *recovery* carries in the general public (earlier discussion). Some of the answers were expected, including those of individuals who may have never considered themselves in recovery (e.g., “I wouldn’t know how to define recovery because I’ve never been in it,” “I’ve heard of the term, but I don’t know. What is it? I guess, it’s being committed to being straight”) and individuals who may have relapsed (e.g., “it used to feel free and happy without using”). Some participants who did not view themselves as in recovery felt they had overcome their problem (e.g., “I am recovered which is beyond recovery”—see later discussion). About one third of the answers from individuals not in recovery echo the public’s perception that recovery means people are “trying” to remain abstinent (earlier discussion): “Someone who is currently on guard about falling off the wagon at any moment.” The idea that, for some, recovery suggests a struggle with drugs, alcohol, or both is further supported by a number of respondents who indicated that they are not in recovery because they are not experiencing drug and/or alcohol problems; for example, “Recovery... I don’t know, a glass of wine ain’t nothing to me” and “it’s not a battle for me—I don’t have to recover from anything.” The connotation of recovery as a struggle with substance abuse problems and statements from participants who felt they had overcome their problem suggest that recovery is understood by some as having had a severe problem. This is consistent with the image of AA being a place only for “skid row drunks.”

Most qualitative recovery definitions among participants who did not consider themselves in recovery indicated that a specific action or time frame was a necessary part of recovery. With respect to time frame, one participant stated, “If I’m over a month or more not using alcohol, marijuana or anything.” The bulk of the answers implying a specific recovery requirement, however, concerned needing or seeking help—getting treatment and/or participating in 12-step recovery: “Being in treatment and not using drugs or alcohol” and “Abstaining and seeking outside help.” Several answers suggested that recovery implies needing to seek outside help because you cannot quit on your own: “Having trouble quitting, needing help,” “When you get some help, like detox, a program or something—not when you just stop on your own,” and “Recovery is a person who is in a 12-step program or an inpatient or outpatient program that they have to be in order to stop using.” Among those not in recovery, participation in 12-step fellowships was mentioned most as an inherent part of recovery: “Recovery is living by 12-steps and I don’t live by them,” “Not using and making meetings, which I’m not doing either of right now,” “Recovery is going to 12 step meetings and not using,” and “Recovery means using the tools that are given by AA/NA.” In qualitative interviews, a few participants explicitly discussed the feeling that recovery is part of the treatment system and that they do not identify with the term: “I guess I, you know, back then, I called it recovery because that’s the structure I was in.”

3.4.3. Covariates of recovery definition

3.4.3.1. Recovery as abstinence versus moderate use.

Findings on the association between recovery definition in terms of substance use and individual characteristics are presented in Table 1. Because results for the forced-choice recovery definition were skewed toward total abstinence, a dichotomous summary measure was computed (total abstinence vs. all other answer categories) since sample sizes for the other answer categories were too small to conduct meaningful statistical analyses. Endorsing total abstinence as the definition of recovery (vs. other more moderate definitions) was associated with non-self-reported drug use between BL and F1, being in a remission for 3 years or longer at F1, and prior exposure to 12-step fellowships and to formal addiction treatment. Race (being African American) was also significantly associated with endorsing abstinence; this is likely a partial artifact of a race difference in 12-step exposure in this sample: African Americans were significantly more likely to have participated in 12-step fellowships than were other races (92.9% vs. 82.5%, respectively; $\chi^2 = 7.42, p < .01$). Moreover, participants who endorsed total abstinence had significantly higher levels of lifetime addiction severity than those who selected a more moderate definition (11.85 vs. 10.6, $F = 10.3, p < .001$); past-year addiction severity was not associated with recovery definition.

To examine further possible subgroup differences, we recoded qualitative answers into dummy variables representing the three major answer categories: recovery defined in terms of substance use, recovery as a new life/well-being, and recovery as a process. We then compared answers as a function of individual characteristics as described earlier. Prior treatment exposure was associated with defining recovery in terms of substance use (46.4% vs. 22.7% for no prior exposure), and being in remission for 3 years or longer was negatively associated with defining recovery in terms of substance use (35.5% vs. 48.1% for those in recovery under 3 years). More men than women defined recovery as a process (24.6% vs. 13.6%), as did non-Hispanic Whites (31.3% vs. 17.6%) and individuals in remission 18 to 36 months (30.2% vs. 17.6%) relative to those in remission under 18 months and more than 3 years. Women were more likely than men to define recovery as a new life (59.3% vs. 48%), as were participants who had not used drugs in the past year (57.8% vs. 43.8%) and those who had not used drugs for 3 years or longer at F1 (55% vs. 47.6%); in contrast, individuals in early remission (under 6 months abstinent at F1) were less likely to define recovery as a new life (41.5% vs. 57.7%).

3.4.4. Benefits of recovery

While participants’ definitions of recovery may speak as much to semantics (i.e., the use of the term *recovery*) as to their experience, answers about what is or would be good about being in recovery illuminate the recovery experience itself. Regardless of the term used, significant behavior

change takes time; it is challenging and stressful. Finding out “what’s in it” for individuals who are living the experience can inform clinical practice (e.g., when working with clients who are weighing the pros and cons of quitting drug use) as well as give hope to active substance users and to their family members. More than half (57%) of participants provided two or more answers. The most frequently cited benefit of recovery, mentioned by one third of participants, is that it is a new life, a second chance (“like being born again, not living a state of denial, enjoying life better, whole new wonderful feeling, health, financially”); one quarter (23%) cited being drug free; other benefits cited were as follows: self-improvement (22.7%); having direction, achieving goals (17.5%); improved/more positive attitude (17.2%); improved finances/living conditions (16.2%); improved physical and/or mental health (16.1%); improved family life (13%); and having friends/a support network (11%).

3.4.5. Recovery: Process or endpoint?

One of the more controversial issues concerning recovery is whether it is a process (with no specific endpoint) or a state (i.e., whether one is ever “recovered”). This question has potentially critical ramifications especially in terms of how recovery is perceived by the public and, indirectly, in terms of stigma and discrimination (e.g., prospective employers who view recovery as a lifelong process may be more likely to not hire a prospective worker in recovery for fear that he or she will relapse or be unreliable). Findings were reviewed earlier, suggesting that the public defines recovery as an attempt to stop using drugs and alcohol, suggesting that it may not be attainable. Thus, while maintaining recovery may be a lifelong process (e.g., maintaining certain practices), it is important to determine whether or not the process is lived as having an end (being recovered). In the United States, the view of addiction as a chronic disorder, paired with the strong 12-step influence (“once an addict, always an addict”), would suggest that recovery is a never-ending process. We collected information that speaks directly to this issue. First, we examined answers to the forced-choice item “Recovery is a continuous process that never ends.” Almost all participants (97%) agreed with the statement at BL (42.6% agreed, 54.2% strongly agreed), and results were not statistically different at F1 or F2. Too few answers fell into the “disagree” categories to conduct meaningful subgroup analyses. Second, participants made qualitative statements that speak to whether one ever “gets there”—that is, becomes recovered, suggesting that, consistent with the disease model of addiction, recovery is a process with no fixed endpoint and that it requires ongoing work.

Recovery is getting back some sort of order in your life, the disease is in remission—it’s not a cure—it has to be maintained daily.

Recovery is somewhere people think they’re going to get to and you’ll never get there.

I don’t think you ever recover from it, it’s learning how to manage it, stay abstinent & become a productive member of society.

you’re never recovered, I mean, it’s always “gonna be back there.”

I think recovery’s a process. Um... for me, it’s just always trying to better myself. Um... and realizing that there may not be an end point, but just a... you know, they always say, like, sometimes it’s better to go through it than to get there.

I’m still on this journey because there is hope, you know. There is not a cure. But there is hope.

And I keep myself in the right, atmosphere or attitude or what not because there is a whole lot to recovery, you know. It ain’t just getting sober and staying clean. It is like you gotta do a lot of work.

4. Discussion

4.1. Reprise of key findings

We set out to address two questions: (a) Does recovery require total abstinence from all drugs and alcohol? and (b) Does it extend to areas of functioning other than substance use? Our findings suggest that recovery requires abstinence from all mood-altering substances but goes beyond substance use; rather, it is a process of self-improvement and an opportunity at a new and better life.

4.2. No occasional anything: Recovery requires total abstinence

SUDs, characterized by impaired control over addicting drugs (American Psychiatric Association, 1994), have been most effectively addressed by abstinence-based treatment approaches. For illicit drug users, the chaotic lifestyle and the consequences of use are likely to persist unless complete abstinence is reached. Prior exposure to treatment and to 12-step fellowships, both of which encourage embracing abstinence as recovery goal, was significantly associated with defining recovery as total abstinence. Interestingly, both individuals who do and do not consider themselves in recovery embraced abstinence as their definition of recovery. While substance users are often ambivalent about quitting drugs, individuals with a long and severe history of substance use who seek remission may come to the conclusion that total abstinence is required from personal experience with relapses and attempts at controlled use. Most failed remission attempts are based on moderation, and abstinence proves more successful (e.g., Burman, 1997; Maisto, Clifford, Longabaugh, & Beattie, 2002). Greater lifetime addiction severity was associated with endorsing abstinence, and some participants who did not consider themselves in recovery indicated that recovery implies struggling and/or needing outside help.

4.3. *Back to me: Discovery and recovery*

With respect to scope, recovery goes beyond substance use for most. This is consistent with 12-step tenets (e.g., “but sobriety is not enough”; AA, 1939/2001, p. 83). Frequently used expressions to define recovery were “a new life,” “a second chance,” or life itself. *To recover* is defined as (a) to get back: REGAIN, (b) to bring back to normal position or condition, (c) to make up for, (d) to find or identify again, and (e) to save from loss and restore to usefulness: RECLAIM (Merriam-Webster's Online Dictionary, 2007). The notion of recovery as getting back something that was lost is worth examining in the present context. The AA founders and early members were typically professional men who had “had a life” (job, family, and reputation) and lost most of it to alcohol. Once “on the wagon,” they had something to get back (regain/reclaim). Many of the clients presenting in treatment programs, particularly publicly funded programs, have nothing (good) to recover. As stated by a survivor of childhood sexual abuse but equally relevant to many severely dependent substance abusers, “recovery implies that you return to something you were before the illness. But I have no before!” (Ralph, Kidder, & Phillips, 2000, p. 3). Several participants framed this notion as regaining something that was lost—the opportunity of becoming what they were meant to be before they started using drugs and alcohol (Section 3.4.2). The Big Book expressed this as “We were reborn” (AA, 1939/2001, p. 63).

4.4. *No such thing as graduating: Recovery is a process rather than an endpoint*

Reclaiming oneself is a process of growth and a process of change in attitudes, thinking, and behaviors, consistent with the rich descriptions and experiences documented by Stephanie Brown (1985). Recovery as a process should not be interpreted as inconsistent with recovery as abstinence; rather, abstinence (a state) is viewed as a requirement of the ongoing process of recovery. The work of change is what distinguishes recovery from mere abstinence (“You could stop doing anything that you want. It’s about the change that comes in—into it, that’s the recovery part.”). The process aspect of recovery has been reported previously in studies conducted among alcohol- and drug-dependent samples both in the United States and abroad (e.g., Blomqvist, 2002; Flynn et al., 2003). A small-scale study of drug-dependent persons abstinent for an average of 9 years sheds light on the stages of the process (Margolis, Kilpatrick, & Mooney, 2000). Participants reported first passing through a phase, particularly the first year, almost solely focused on staying abstinent. Only once this foundation (abstinence) was established could they concentrate on “living a normal life,” where abstinence was no longer the main focus. Finally, following that transitional period, the individual enters late recovery, a time of

individual growth and search for meaning. Our findings on the focus of recovery definitions are consistent with these stages: Individuals in remission 18 to 36 months (the transition phase) were more likely to define recovery as a process, whereas those in remission 3 years or longer were more likely to focus on the “new life” aspect of recovery and less likely to define recovery in terms of substance use.

Conceptualizing recovery as a process leads to the question of whether one ever “gets there”—whether one is ever “recovered.” This is rarely discussed in scientific literature. Most participants regard recovery as “an ongoing process. There’s no such thing as graduating.” This is consistent with the disease model and with prevalent view of addiction as a “chronic” condition (McLellan, Lewis, O’Brien, & Kleber, 2000; White, Boyle, & Loveland, 2002); it is also consistent with reports that resolving addiction often takes multiple attempt and treatment episodes (e.g., Dennis, Scott, Funk, & Foss, 2005; Laudet & White, 2004).

Other biomedical fields have reached a consensus about what clinical “remission” means (e.g., disease free for 5 years in oncology). Whether and when SUD remission ever becomes “stable” in terms of substance use (i.e., when the risk of return to drug use is minimized) remain somewhat unsettled; we lack long-term studies, especially among drug users, and we lack information on rates or patterns of continuous abstinence, an observation made a decade ago (Morgan, 1995), but that is still valid. Researchers have used durations ranging from 1 year (e.g., Burman, 1997; Dennis et al., 2005) to 6 years (e.g., Kubicek et al., 2002) to operationalize “sustained,” “secure,” or stable remission. The time frame most commonly used is 3 to 5 years (Finney & Moos, 1991; Flynn et al., 2003; Longabaugh & Lewis, 1988; Timko, Moos, Finney, & Lesar, 2000; Vaillant, 1983/1995), and it corresponds to the experiences of persons in long-term recovery (Margolis et al., 2000). While the risk of relapse does not completely disappear after 3 years or even after 5 years of continuous abstinence (e.g., Hser, Hoffman, Grella, & Anglin, 2001), it appears to be minimal (e.g., Vaillant, 1983/1995).

4.5. *Implications for clinical practice and assessment*

Addiction is a chronic condition; there may not be a complete or permanent solution (i.e., the risk of relapse may remain for multiple years), but it can be treated and managed. There are many paths to recovery (e.g., Moos & Moos, 2005), but treatment is most often needed when dependence is chronic and severe. This may be particularly true of individuals who are drug (vs. alcohol) dependent as they tend to have exhausted more of their social resources prior to seeking treatment (Blomqvist, 2002). Our findings suggest that for severely dependent individuals, recovery is a process of change and growth for which abstinence from alcohol and other drugs is a prerequisite.

In seeking to foster recovery, we first need to ask, “recovery from what?” Substance use and remission are multidetermined processes, and chronic substance use affects all areas of life. Most clinical interventions, especially those for chronic conditions and public health problems, are evaluated not only for their effectiveness at reducing symptoms but also for their extended effects on the disease-related costs to the individual and to society (Stewart & Ware, 1989). Thus, addressing (resolving) substance use only is likely to lead to a rather poor prognosis lest other causes and consequences are addressed as well. McLellan et al. (2005) have made the argument that “Typically, the immediate goal of reducing alcohol and drug use is necessary but rarely sufficient for the achievement of the longer-term goals of improved personal health and social function and reduced threats to public health and safety—i.e. recovery” (p. 448). This conceptualization of clinical outcome is consistent with the World Health Organization’s conceptualization of health as “a state of complete physical, mental, and social well-being, not merely the absence of disease” (World Health Organization, 1985, p. 34).

Whether, as a nation, we are willing to pay for positive health (wellness)-oriented services for substance-dependent populations is unclear. From a clinical perspective, fostering optimal functioning has intuitive appeal and an empirical basis. One of the most important predictors of remission is having something to lose (e.g., friends, job) if substance use continues or resumes (Havassy, Wasserman, & Hall, 1993; Vaillant, 1983/1995). Present findings suggest that the benefits of recovery are many (improved health, life conditions, social life, etc.) and they are highly valued. Quality of life (QOL) among active users is poor, and abstinence, especially sustained abstinence, is associated with QOL improvements (e.g., Donovan, Mattson, Cisler, Longanaugh, & Zweben, 2005; Foster, Powell, Marshall, & Peters, 1999; Laudet, Morgen, & White, 2006; Morgan, Morgenstern, Blanchard, Labouvie, & Bux, 2003). These improvements may “increase the price” of future substance use and foster sustained remission. Higher life satisfaction prospectively predicts sustained remission (Laudet, Becker, & White, *in press*; also see Rudolf & Priebe, 2002), and low QOL may heighten relapse risk (Claus, Mannen, & Schicht, 1999; Hoffmann & Miller, 1993). Thus, the clinical goal of addiction treatment must go beyond fostering reduction in substance use to improving personal and social health. The addiction field can seek guidance from the mental health field where recovery has gained importance in service delivery and research, including a working definition set forth in the New Freedom Commission on Mental Health: “Recovery refers to the process in which people are able to live, work, learn, and participate fully in their communities” (New Freedom Commission on Mental Health, 2003, p. 5).

How do clinicians foster recovery? Vaillant (1983/1995) described the conditions necessary to the recovery process as abstinence, substitute dependencies, behavioral and medical consequences, enhanced hope and self-esteem, and social

support in the form of unambivalent relationships. Persons in recovery consistently cite the support of family and peers (and the need to seek and accept support), spirituality, inner strength, and the desire to get better as critical sources of strength (e.g., Blomqvist, 2002; Flynn et al., 2003; Laudet et al., 2002). Many clients initiate treatment due to external pressures (family, legal, and employment) and may not be initially motivated for change; however, once in the therapeutic environment, even externally motivated clients (e.g., legally mandated) may reflect on their situation and accept the need for treatment (Kelly, Finney, & Moos, 2005). The cessation of substance use is often preceded by a period of cognitive preparation (akin to the contemplation stage; Prochaska & DiClemente, 1992—e.g., Burman, 1997, 2003; Sobell et al., 2001); participating in treatment during this period may significantly enhance motivation for change by introducing the notion that behaviors and activities that are not drug related could have healthier consequences and provide more satisfying reward possibilities (Burman, 2003), thus “raising the price” of subsequent substance use and enhancing the likelihood of abstinence.

As access to and duration of formal services are reduced due to fiscal austerity and aggressive managed care, clinical outcomes may be increasingly influenced by the degree to which treatment programs actively support clients’ transition into posttreatment recovery including affiliation with 12-step or alternative mutual aid structures (Humphreys, Mankowski, Moos, & Finney, 1999; Mankowski, Humphreys, & Moos, 2001). Twelve-step fellowships foster positive and enduring outcomes (e.g., Kelly, Stout, Zywiak, & Schneider, 2006) and, in the United States, have the advantage of being widely available and free of charge. Despite being referred to 12-step fellowships by clinicians (Humphreys, 1997; Laudet & White, 2005) and expressing positive views about 12-step groups (Laudet, 2003), a large minority of clients never do participate in 12-step fellowships or engage briefly and drop out early on (e.g., Fiorentine, 1999). Clinicians can play an important role in referring and educating clients about recovery mutual aid groups best fitted to individual clients’ needs (Laudet & White, 2005). Spiritual beliefs and life meaning are associated with better substance use outcomes and buffer stress (for review, see Laudet et al., 2006), the most often cited reasons for relapse (e.g., Laudet, Magura, Vogel, & Knight, 2004; Titus et al., 2002). While it may be difficult for clinicians to foster the embracement of spiritual beliefs, encouraging “meaning making” can help gain perspective on the past and afford a sense of control on the future (White, Laudet, & Becker, 2006). In sum, clinicians can enhance the likelihood of recovery both during services and after services end by assisting clients in effecting changes in behavior, attitudes, and social network to strengthen social and recovery capital (Granfield & Cloud, 2001) and to build a satisfactory social life away from the drug scene (Blomqvist, 2002).

In terms of recovery assessment, the outcome domains proposed by McLellan et al. (2005) as evidence of treatment

effectiveness, namely, reduction in substance use, improvements in personal and social health, and reduction in threats to public health and safety, represent a promising step toward a more comprehensive operationalization of recovery relative to what remains business as usual—assessing substance use. Overall, fostering and assessing recovery as described here will require that the field makes two paradigmatic shifts: first, a shift away from pathology-focused care and evaluation to wellness-oriented practices; second, a shift away from the prevalent acute care model where one treatment episode is expected to “cure” drug dependence to one of sustained recovery management. Analogous to the long-term management of other chronic diseases (diabetes, hypertension), sustained recovery management assumes that the processes involved in fostering and sustaining change may occur gradually over multiple, linked service interventions that unfold over years (Dennis et al., 2005; McLellan et al., 2005). The empirically supported model (Scott, Dennis, & Foss, 2005) emphasizes posttreatment monitoring and support, active linkage to recovery mutual aid, stage-appropriate recovery education, and early reintervention as needed (White et al., 2002).

4.6. Limitations

This is the first large-scale prospective study on recovery from drug and alcohol problems that explicitly seeks to elucidate the recovery concept and phenomenology based on a lived-experience perspective rather than on the researchers' definitions. It represents a critical first step in a much needed research effort toward a comprehensive investigation of the long-term recovery experience. However, the study has several limitations that should be considered when interpreting findings. First, participants were members of urban, typically underserved minorities and characterized by a long and severe history of polysubstance use. Findings may not apply to members of other groups, such as persons with lower problem severity, those living in smaller cities or rural areas, individuals whose primary dependence is to alcohol, and individuals who had high levels of prerecovery resources (job, education, and support system) or who maintained functioning during active use and have social and recovery capital after drug use ceases. Currently, the scarcity of research on the recovery experience makes it challenging to determine the generalizability of current findings to other subpopulations. Second, most participants had prior exposure to treatment and to 12-step fellowships, and this was associated with how recovery is defined. Findings may not apply to individuals who attained remission without help. “Self-changers” may differ from recovery-assisted individuals in critical ways. As of this writing, little is known about rates of self-change remission among severely dependent persons; additional research is needed as self-change may elucidate some aspects of the change process that remains underinvestigated (Blomqvist, 2002). Third, information on recovery definitions and experiences was not collected at the

BL interview. We sought to minimize burden on participants as the protocol was lengthy; retrospectively, this would have been critical information to acquire at BL to have a more comprehensive picture of change over time; however, we note that we found few changes in how recovery was defined in terms of substance use between F1 and F2. We are in the process of analyzing the qualitative data that provide richer information about possible changes in recovery experiences over time.

4.7. Remaining questions and future directions

Despite the recent increase in popularity of the term *recovery*, more questions remain unanswered than have been settled. Questions that must be addressed include how to conceptualize, foster, and assess recovery among “special populations” including individuals dually diagnosed with a psychiatric disorder, those with multiple dependences (e.g., substance use and gambling), and substance-dependent persons receiving pharmacotherapy (e.g., methadone, buprenorphine, acamprosate); this last group is going to become increasingly critical as these therapies become more widely used and accepted. Another important yet neglected question is that of factors associated with the long-term maintenance of recovery. Factors implicated in initiating and maintaining behavior change are not necessarily similar; persons in recovery describe successive phases with changing focus, challenges, and coping requirements (e.g., Margolis et al., 2000), and different domains gain and lose predictive power over the course of recovery “stages” (Laudet & White, in press). More research is needed to guide continuing care and to inform the recovery community on how to maximize the likelihood that recovery is sustained. The role of sociocultural context in how recovery is experienced and defined is also important: How alcohol and drug use is addressed and regarded by a given society may influence recovery goals, paths, course, and outcomes (e.g., harm minimization vs. abstinence-based policies); a cross-cultural replication of the present project is underway in Australia as a first step toward identifying “universal” and culture-specific recovery processes. This study is meant to highlight areas of future investigation as much as to answer critical issues, and it is the author's hope that it will stimulate other addiction scientists to incorporate the recovery paradigm in their work and to do so in full partnership with the recovery community.

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