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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: (1) Does recovery require total abstinence from all drugs and alcohol? and (2) 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 of 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.

Keywords

Recovery; addiction; substance abuse; remission; process

1. Introduction

Recovery, a concept once associated almost exclusively with 12-step fellowships such as Alcoholics Anonymous, has become all but a buzz word in government agencies. This includes the National Institute on Alcohol Abuse and Alcoholism (NIAAA) renaming its Division of Treatment to Division of Treatment and Recovery Research, the White House’s 2003 *Access to Recovery* (ATR) 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 websites (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 at reaching that goal; the goal must be

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strictly and explicitly defined and there must be a consensus among the various stakeholders (policy makers, 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 and Desmond, 1986 – see later discussion). Second, substance abuse (alcohol and other drug) is a much publicized and highly stigmatized condition in the US. Stigma leads to discrimination that may thwart efforts at self improvement such as securing employment or housing. Recovery is a reality for many, although 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 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 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 paper 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 or 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 other drugs,” over 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 and/or alcohol abuse, 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. These results mirror that 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, 2001). 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 rehab 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 website features 'Workers in recovery,' several pages devoted to informing prospective employers about what to expect from workers in recovery, including a systematic effort at addressing common misconceptions. Like virtually every article and public message on of 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 (FAVOR). Websites 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; for example, and one organization 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 five years that contain the term 'recovery' in the title suggests that in spite of 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 from the substance under study (e.g., Burman, 1997; Flynn et al., 2003; Granfield & Cloud, 2001; Scott et al., 2005a). 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 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 US 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*" (2001).

1.4 Study objectives

So, 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 et al., 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: (1) Does recovery require total abstinence from all drugs and alcohol? and (2) 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 one-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 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- DAST 10 - Skinner, 1982), current utilization of treatment services and of 12-step meetings, and contact information. Eligibility criteria for the study were: (1) fulfilling the DSM-IV criteria for abuse or dependence of any illicit drug (American Psychiatric Association, 1994) for at least one year in one's lifetime, but not in the past month; (2) self-reported abstinence from illicit drugs for at least one month, and (3) not being enrolled in residential treatment.² Eligible callers were contacted within a week to schedule an in-person interview. Seven hundred and two unduplicated screenings were conducted; of those, 440 were eligible; 354 were interviewed (81% of eligibles). [Reasons why 86 eligibles were not interviewed: unable to contact with information given during screening – e.g. disconnected telephone (39), did not come to appointment and unable to contact to reschedule (19), refused (10), relapsed between screening and scheduling call (6), data collection ended (12).].

The study was reviewed and approved by the author's Institutional Review Board (IRB) and we obtained a certificate of confidentiality from the funding agency. In-person interviews were conducted yearly. Data were collected through in-person interviews using interviewer-administered computer-assisted software and recorded on laptops. The baseline interview (BL) session started by administering the informed consent procedure: The study goals, participation

¹Sample text of 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"

²This 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 BL community-related factors on subsequent outcome.

requirements and interview schedule were explained including the voluntary nature of the study, 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 two and a half hours; the one- and two-year follow-ups (F1 and F2, respectively) omitted the background and historical information. Participant received \$30 to compensate them for their time at BL, \$40 and \$50 at 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 include a small gift – typically a \$5 gift card redeemable at local businesses (e.g., fast food, video rental). Of the 354 participants, nine had died, one reported having never used an illicit drug and was excluded from the study, and BL data were lost for two participants, resulting in a working BL cohort of 342 individuals. We conducted 317 F1 interviews on average (mean 379 days after BL (St Dev. = 45 days) and 308 F2 interviews a mean of 361 days after F1 (St. Dev. = 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 for surviving BL cohort).

In addition to the quantitative data from which most of present findings emanate, we also conducted qualitative life history interviews with an additional 50 participants who were recruited as described above and re-interviewed once (F1). The qualitative interviews were audio-recorded, transcribed and are being 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 about specific recovery-related experiences and beliefs, as described below (the latter is being collected at the follow-up interviews only). The semi-structured 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 et al., 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 Non-alcohol Psychoactive Substance Use Disorders subscale of the Mini International Neuropsychiatric Interview (M.I.N.I.), a short structured diagnostic interview developed in the United States and Europe for DSM-IV and ICD-10 psychiatric disorders (Sheehan, Lecrubier, Harnett-Sheehan, Amorim, Janavs, Weiller 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 (SCID-P) in English and French and against the Composite International Diagnostic Interview for ICD-10 (CIDI). 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. 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?” Chronbach 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 (ASI - McLellan, Kushner, Metzger, 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 since *most recent use of any of the illicit drug* ever used, in months (i.e., if 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 variables 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., over two 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 under-reporting is typically more prevalent in this population than is over reporting.

Remission stage Four time-linked benchmarks ‘stages’ were used: Under 6 months of abstinence at BL (28 %), 6 to under 18-months (26%), 18 to 36 months (20%), and over three 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 dataset 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 dataset, they also afforded four groups of relatively equal size at BL, which is statistically desirable.

Mental health history At BL, (a) ever received treatment for a mental health problem, (b) ever diagnosed with a mental health disorder; and if yes, (c) what is/are the diagnosis(es)?

2.2.2 Treatment and 12-step utilization

Treatment utilization Prior and current participation in any of the following addiction treatment services: Detoxification (drug or alcohol), methadone maintenance, therapeutic community, 21/28 day inpatient rehab, 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, in the past year at F1 and F2 (yes/no).

Twelve-step participation Attendance at Alcoholics Anonymous (AA), Narcotics Anonymous (NA) and Cocaine Anonymous (CA) meetings assessed separately: Ever at BL, 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 Do you consider yourself in recovery? (yes/no)

Length of recovery Participants answering ‘yes’ to ‘in recovery’ were asked: How long have you been in recovery?

The measures describe 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 corresponds 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 regards to drug and alcohol use? Same answer categories as in recovery definition described above. We asked this item because we wanted to determine whether personal goals were similar to or different from definition of recovery.

Benefits of recovery Open-ended question: “What, if anything, is/would be good about being in recovery?”

Recovery belief The instrument included the Addiction Belief Inventory (Luke et al., 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, strongly agree).

2.3 Overview of analyses

Before address the study question, we conducted analyses to compare participants included in the analyses ($n = 289$) with those surviving who were not re-interviewed 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, 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 semi-structured 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), inter-rater reliability ranges from .90 to .94 (BL, one- and two-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 ($p < 0.05$) (a) to be older by three years at BL (mean = 43 vs. 39.8); (b) to have longer

abstinence (32 months vs. 13 months); specifically 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 (mean = 43, Std. Dev = 7.8). Educational attainment ranged from 5 to 18 years of schooling (mean = 12 years, Std. Dev = 2). At recruitment, 20% were employed part-time, 22% 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. Over half (56%) were single, 16% were married and 28% were widowed, separated or divorced. One quarter (24%) reported being HIV+ and 30.8% HCV+. Four out of ten (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%) The majority (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 (Std. Dev. = 2.4; out of maximum score of 14). Most participants were polysubstance users. 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 (Std. Dev.=12 years). Abstinence length at BL ranged from one month to over ten years (Mean = 30.8 months, Median = 15.7, Std dev = 42 months).

Two-third 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 two 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 two years between BL and F2: mean length of abstinence at BL among participants who remained abstinent at F1 was three and a half years (40.8 months) 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, compared to over four 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 two years between BL and F2. Individuals who had never received treatment or participated in 12-step 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 at BL ($N = 18$ at F2); these individuals reported significantly lower lifetime addiction severity (mean = 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, 78.2% at F2. *Length of recovery* at F1 among participants

self-identified as in recovery ranged from under one month to 27 years (mean = 47.5 months, Std dev = 46.1); *length of abstinence* in this group ranged from none to 24.2 years (mean = 38.2 months, Std dev = 44.6). At F2, *length of recovery* among those who self-identified as 'in recovery' ranged from none to 26 years (mean = 58.9 months, Std dev = 52.6) whereas *length of abstinence* averaged 45.7 months (Std dev = 47.5 months). Most participants who had not used drugs in the previous year at F1 considered themselves in recovery (91.7%), compared with 55.5% of those who had used since BL (Chi sq. = 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 lengths 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 vs. 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 vs. 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 (St. Dev = 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. Since 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, 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: 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 over 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 and/or alcohol is further supported by a number of respondents who indicated that they are not in recovery because they are not experiencing drugs 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.’

The majority of qualitative recovery definitions among participants who did *not* consider themselves in recovery indicated that a specific action or timeframe was a necessary part of recovery. With respect to timeframe, 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,”* *“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 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. Since 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) because 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 not 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 than were other races (92.9% vs. 82.5 others, $\chi^2 = 7.42$, $p < .01$). 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 three 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 under 18 months and over 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 three 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. Over one-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 in were: 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 when speaking of 'recovery' is whether it is process (with no specific endpoint) or a state (i.e., whether one is ever 'recovered'). This question has potentially critical ramifications especially in terms 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 he/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 US, 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’ – i.e., becomes recovered, suggesting that consistent with the disease model of addiction, recovery is a process with no fixed end point, 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: (1) Does recovery require total abstinence from all drugs and alcohol? and (2) 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

Substance abuse disorders (SUD), 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, et al., 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*,” Alcoholic Anonymous, 1939/2001, p. 83). Frequently used expressions to define recovery were ‘a new life,’ ‘a second chance,’ or, life itself. The verb “to recover” is defined as (1) to get back : REGAIN; (2) to bring back to normal position or condition; (3) to make up for; (4) to find or identify again; and (5) to save from loss and restore to usefulness: RECLAIM (Merriam Webster). 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, 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 re-cover. 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 US 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 et al., 2000). Participants reported first passing through a phase almost solely focused on staying abstinent, particularly the first year. 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 three 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, and Kleber, 2000; White, Boyle and Loveland, 2002); it is also consistent with reports that resolving addiction often takes multiple attempt and treatment episodes (e.g., Dennis et al, 2005; Laudet & White, 2004).

Other biomedical fields have reached consensus about what clinical ‘remission’ means (e.g., five years disease free 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) remains 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 one year (e.g., Burman, 1997; Dennis et al., 2005) to six years (e.g., Kubicek, Morgan & Morrison, 2002) to operationalize ‘sustained,’ ‘secure’ or stable remission. Three to five years is the timeframe most commonly used (Finney and Moos, 1991; Flynn et al, 2003; Longabaugh & Lewis, 1988; Timko et al., 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 three or even five years of continuous abstinence (e.g., Hser et al., 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 others drugs is a prerequisite.

In seeking to foster recovery, we first need to ask: “recovery from what?” Substance use and remission are multi-determined 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 and colleagues (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” (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 et al., 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 et al., 2005; Foster et al., 1999; Laudet et al., 2006; Morgan et al., 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” (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, 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, Finnney & 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 and 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 post-treatment recovery including affiliation with 12-step or alternative mutual aid structures (Humphreys et al., 1999; Mankowski et al., 2001). Twelve-step fellowships foster positive and enduring outcomes (e.g., Kelly et al., 2006) and, in the US, have the advantage of being widely available and free of charge. In spite of being referred to 12-step 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 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 buffers stress (for review, Laudet et al., 2006), the most often cited reasons for relapse (e.g., Laudet, Magura, et al., 2004; Titus, Dennis, White, Godley, Tims, & Diamond., 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 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 and colleagues (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 and Foss, 2005b) emphasizes post-treatment monitoring and support, active linkage to recovery mutual aid, stage-appropriate recovery education, and early re-intervention 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 from a lived-experience perspective rather than using 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 poly-substance 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, individuals who had high levels of pre-recovery resources (job, education, 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 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. At 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 under-investigated (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); the latter 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 socio-cultural 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 identify 'universal' and culture specific recovery processes. The present 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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Table 1

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

	N ^a	% of total sample	Percent endorsing total abstinence
Total sample	289	100%	86.5%
Gender - Men	157	54.3	86.5
Women	132	45.7	86.4
Age			
Under 40	93	32.2	81.4
40 to under 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 mental health treatment – yes	122	42.2	85.4
Ever mental health treatment – 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 past year ***			
No use past year	191	66.2	90.8
Used past year	98	33.8	78.8
Remission stage at F1			
Under 6 months **	85	29.9	77.6
Six to 18 months	35	12.3	80.0
18 – 36 months	48	16.6	87.5
Three + years **	116	40.8	94.0
Considers self in recovery - yes	224	78.9	87.0
Considers self in recovery - no ***	60	21.1	84.4
12-step history			
Ever participated	257	88.9	88.9
Never participated in 12-step ***	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) **			
Yes (treatment and/or 12-step)	269	93.4	88.1
No ('natural recovery')	19	6.6	65.4

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

* = p < .05,

** = p < .01

*** = p < .001