# UCLA

UCLA Previously Published Works

Title

How do recovery definitions distinguish recovering individuals? Five typologies.

Permalink

https://escholarship.org/uc/item/1058022s

Authors

Witbrodt, Jane Kaskutas, Lee Grella, Christine

Publication Date

2015-03-01

DOI 10.1016/j.drugalcdep.2014.12.036

Peer reviewed



# NIH Public Access

**Author Manuscript** 

Drug Alcohol Depend. Author manuscript; available in PMC 2015 March 01.

# Published in final edited form as:

Drug Alcohol Depend. 2015 March 1; 0: 109-117. doi:10.1016/j.drugalcdep.2014.12.036.

# How do recovery definitions distinguish recovering individuals?:

# **Five Typologies**

# Jane Witbrodt<sup>a,b</sup>, Lee Ann Kaskutas<sup>b</sup>, and Christine E. Grella<sup>c</sup>

<sup>b</sup> Alcohol Research Group, Public Health Institute, 6475 Christie Avenue, Suite 400, Emeryville, CA 94608-1010, United States

<sup>c</sup> UCLA Integrated Substance Abuse Programs, Department of Psychiatry & Biobehavior Sciences, 11075 Santa Monica Blvd, Suite 200, Los Angeles, CA 90025, United States

# Abstract

**Background**—Six percent of American adults say they are "in recovery" from an alcohol or drug problem yet only a scant emergent literature has begun to ask how they define "recovery" or explored whether there is heterogeneity among their definitions.

**Methods**—Secondary analysis of the What Is Recovery? online survey employed Latent Class Analysis (LCA) to identify typologies of study participants based on their actual endorsement of 39 recovery elements and to compare the composition of these typologies in terms of distinguishing personal characteristics.

**Results**—A 5-class solution provided the best fit and conceptual representation for the recovery definitions. Classes were labeled *12-Step Traditionalist* (n=4912); *12-Step Enthusiast* (n=2014); *Secular* (n=980); *Self-Reliant* (n=1040); and *Atypical* (n=382) based on patterns of endorsement of the recovery elements. Abstinence, spiritual, and social interaction elements differentiated the classes most (as did age and recovery duration but to a lesser extent). Although levels and patterns of endorsement to the elements varied by class, a rank-ordering of the top 10 elements indicated that four elements were endorsed by all five classes: being honest with myself, handling negative feelings without using, being able to enjoy life, and process of growth and development.

**Conclusions**—The results of the LCA demonstrate the diversity of meanings, and varying degrees of identification with, specific elements of recovery. As others have found, multiple constituents are invested in how recovery is defined and this has ramifications for professional, personal, and cultural processes related to how strategies to promote recovery are implemented.

# Keywords

recovery; recovered; remission; help-seeking; addiction; treatment

<sup>a</sup> Corresponding author jwitbrodt@arg.org. (510) 597-3440, lkaskutas@arg.org. (310) 267-5451, cgrella@mednet.ucla.edu. **Conflict of interest** No conflict declared.

# 1. Introduction

The concept of "recovery" is widely used within popular discourse, and is commonly assumed to refer to a transition from problematic alcohol or drug use to an ongoing commitment to maintaining abstinence/sobriety. Promoting recovery from substance use problems is now part of the approach to United States drug policy that includes "making recovery a formal area of focus" (Office of National Drug Control Policy, 2014). Emergent recovery-oriented systems of care (ROSC) recognize the chronic nature of addiction and encompass community-based strategies to develop support for long-term recovery (White, 2009; White et al., 2002).

Although abstinence from alcohol and drugs is assumed to be a core criterion of recovery historically, clinical diagnostic criteria have distinguished between "abstinent-recovery" and "non-abstinent recovery" with regard to alcohol use (Dawson et al., 2006). In their review of various empirical definitions of recovery in drug research, Tims further observed that the "criteria and complexity [of recovery] may be related to the drug in question, the treatments available, and the sources of social support" (Tims et al., 2001). Qualitative research with substance users has emphasized the diverse ways in which individuals construe the meanings of recovery in their personal narratives, including how their self-identity is shaped through their social interactions and therapeutic relationships (Addenbrooke, 2011; Best et al., 2011; Hänninen and Koski-Jännes, 1999; Hser, 2007; Lysaker and Buck, 2006; McIntosh and McKeganey, 2000; Vigilant, 2008). Nascent studies have broadened the concept of recovery to include indicators of functioning other than substance use (Laudet, 2007). A recent Consensus Statement developed by treatment providers, researchers, policy makers, and recovery advocates further illustrates this multi-dimensional approach, defining recovery as "a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship" (The Betty Ford Institute Consensus Panel, 2007, p.222).

To inform flexible ROSC strategies that accommodate a range of recovery definitions, participants from a nationwide study entitled "What is Recovery?" (WIR) identified elements of recovery (detailed below) that were highly endorsed regardless of recovery pathway (e.g., treatment, self-help, abstinence or moderate use), while also capturing elements unique to specific pathways (Kaskutas et al., 2014). Taking advantage of the large WIR sample (nearly 10,000), the goal of this secondary analysis is to employ a multi-dimensional finite mixture modeling approach, latent class analysis (LCA) to: (1) identify typologies of participants based on their actual endorsement of the recovery elements, and (2) study the composition of these typologies in terms of personal characteristics that distinguish them.

Given the diverse, self-defined recovery pathways of the WIR participants, hypotheses consider the distinct elements that characterize 12-step approaches (such as abstinence and spirituality). We hypothesize that elements relating to abstinence and spirituality will distinguish the emergent typologies more than other recovery elements. Moreover, we hypothesize that typologies will differ in how much their definitions of recovery incorporate social interactions with others. Study findings can elucidate the ways in which personal definitions of recovery cluster in relation to other dimensions, including socio-

demographics, treatment, 12-step participation, type and duration of substance use, current alcohol and drug use, and self-perceived quality of life.

# 2. Methods

#### 2.1 Background and recruitment

The "What is Recovery?" project culminated in an Internet-based survey completed by 9,341 individuals who identified themselves variously as being in recovery, recovered, in medication-assisted recovery, or having had a problem with alcohol and drugs (but no longer do). In Phase 1,167 potential elements of recovery were developed through an extensive, iterative mixed-methods (qualitative and quantitative) process that first involved interviews with dozens of people in recovery from different pathways as well as a review of websites, articles and books about recovery. These elements were administered to 238 respondents via an Internet survey, followed by over 50 in-depth interviews to clarify their definitions. Redundant elements and those deemed by respondents to be irrelevant to recovery were eliminated, resulting in 47 retained elements for the Phase 2 survey.

Phase 2 participants were recruited via a wide-ranging, purposeful recruitment strategy designed to yield a sample reflecting the heterogeneity of recovery pathways. Outreach involved treatment and recovery organizations, self-help groups, and electronic media (Subbaraman et al., in press). Recruitment materials directed potential participants to the study website (http://www.WhatIsRecovery.org), which included an explanation of the study and the link to the anonymous, confidential online survey. The 20-minute online survey was available July to October 2012.

The demographic profile of the Phase 2 respondents is almost identical to another internetbased recovery sample (Laudet, 2013), and the treated respondents are similar to other treatment samples (Subbaraman et al., in press). Factor analyses of the recovery elements were conducted using split-half samples to statistically reduce and group elements into smaller components, followed by sensitivity analyses for key recovery pathway groupings to assure that the elements represented the heterogeneous voices of recovery (Kaskutas et al., 2014). Factor analysis reduced the pool to 35 recovery elements spanning four factors; four uncommon elements that did not load on any factor were retained because their content was important to some subgroups in recovery. Participants provided informed consent using procedures approved by the Institutional Review Board of the Public Health Institute.

#### 2.2 Measures

**2.2.1 Recovery elements**—The root question for the 39 recovery elements read: The next groups of questions cover many different topics that people might include in their definition of recovery. We want to know which ones you think belong in a definition of recovery as you have experienced it. There is no right or wrong answer to any of the question; we are interested only in your opinions and experiences. For each item, we want you to tell us whether the item: (1) definitely belongs in your definition of recovery, (2) somewhat belongs in your definition of recovery, (3) does not belong in your definition of

recovery, but may belong in other people's definition of recovery, or (4) does not really belong in a definition of recovery.

**2.2.2 Personal characteristics**—Questions used here include demographics, prerecovery severity, recovery pathway, and quality of life (QoL). Past substance use disorder severity was assessed based on the lifetime version of the International Neuropsychiatric Interview, a short structured diagnostic interview for DSM-IV and ICD-10 psychiatric disorders (Sheehan et al., 1998). Recovery pathway measured exposure to 12-step groups, non-12-step groups, and specialty treatment. These were recoded as none (natural recovery) or into six mutually exclusive groupings based on combinations of help-seeking. Lifetime 12-step group exposure was dichotomized ( 90 versus > 90 meetings). Current substance use status was coded as four discrete categories (alcohol and drug abstinence, alcohol-only abstinence, drug-only abstinence, or alcohol and drug use). A WHO quality of life measure (The WHOQOL Group, 1998) used in other recovery research (Laudet, 2011; Laudet et al., 2009) read, "How would you rate your quality of life?" (poor, neither poor nor good, good, and very good).

**2.3 Statistical analysis**—Mplus, Version 7.2 (Muthén and Muthén, 2013) was used to statistically identify clusters of persons (latent classes) based on their observed responses to the 39 recovery elements. An optimal model was determined using standardized fit indices, class specific item probability parameters, and theoretical consideration (Muthén and Muthén, 2000). Mplus uses a full-information maximum likelihood estimation under the assumption that data are missing at random (Little and Rubin, 2002; Muthén and Shedden, 1999). Bivariate tests were conducted to compare the resultant classes on background characteristics described above.

# 3. Results

#### 3.1 Sample

The resultant sample was over half female, almost three-fourths were over age 35, and half had a bachelor's degree (Table 1, last column). The primary problem substance was alcohol. Only 2% did not meet criteria for alcohol or drug dependence. Three-quarters identified themselves as "in recovery" and the majority had been in their self-defined status for over 5 years. Most reported current abstinence from both alcohol and drugs and endorsed the belief that recovery is abstinence. Most had sought some form of help for their substance use problems - 4% were in natural recovery. Only 2% reported a poor QoL.

#### 3.2 Latent class models

A 5-class solution provided the best fit and conceptual representation for these data. Loglikelihood and BIC fit-indicators (Nylund et al., 2004) improved with the addition of class solutions up to a 6-class solution. The Vuong-Lo-Mendell-Rubin likelihood test (Lo et al., 2001) for a 4- versus 5- class solution was significant (p<.05), indicating the 5-class solution provided better fit for the data. The 5-class entropy value (0.91) was good (Muthén and Muthén, 2008). We labeled the five classes: 12-Step Traditionalist (n=4912); 12-Step Enthusiast (n=2014); Secular (n=980); Self-Reliant (n=1040); and Atypical (n=382).

Average latent class (posterior) probabilities for the most likely latent class membership were 0.96, 0.90, 0.91, 0.94 and 0.96.

To discuss LCA differences among the five-classes, responses to the recovery elements are grouped into sections corresponding to the four conceptual domains obtained from the prior factor analysis (abstinence, spirituality, essentials of recovery, enriched recovery) plus the fifth group of "uncommon" elements. Personal characteristics are described in conjunction with response patterns to the elements. In describing the classes henceforth, we use the words personal endorsement in reference to elements rated "definitely" or "somewhat" belongs, and the word tolerance in reference to elements rated "may belong."

#### 3.3 Class profiles

**3.3.1 12-Step Traditionalist class**—12-Step Traditionalists were strongly abstinenceoriented, with most indicating that *no alcohol use*, *no use of non-prescribed drugs*, and *no abuse of prescribed drugs* definitely belong in their definition of recovery (Table 2.1). They were strongly supportive of spirituality elements (Table 2.2): more than 90% chose definitely belongs for six of seven elements. They strongly endorsed all 15 essential elements of recovery (Table 2.3) and gave equally strong support for the enriched elements (Table 2.4): *process of growth and development*, and *living a life that contributes* were unanimously endorsed as "definitely belongs."

12-Step Traditionalists reported high lifetime treatment and 12-step group attendance, and a similarly high proportion self-identified as in recovery (Table 1). Nearly all reported current alcohol and drug abstinence. Just over half characterized their QoL as very good.

**3.3.2. 12-Step Enthusiast class**—Much like 12-Step Traditionalists, 12-Step Enthusiasts strongly endorsed the abstinence-oriented elements, although only about two-thirds thought that *no use of non-prescribed drugs* definitely belongs in their definition (Table 2.1). As a class, they too personally endorsed spirituality elements (Table 2.2), however, about one in five were more moderate in their endorsement (selecting somewhat belongs rather than definitely belongs) for six of seven elements (the exception, *being grateful*, was strongly endorsed by nearly all).

Most 12-Step Enthusiasts personally endorsed all essentials elements (Table 2.3): most gave strong endorsement for three elements (*being honest with myself*, handling negative feelings without using alcohol or drugs like I used to, and *being able to enjoy life*) and about as many personally endorsed ten other elements in this domain. They were strongly supportive of four enriched elements (process of growth and development, reacting in a more balanced way, taking responsibility, and *living a life that contributes*), with 90% or more indicating these definitely belong in their definition (Table 2.4); almost all chose either somewhat or definitely belongs for the other enriched elements.

Like the Traditionalist class, 12-step Enthusiasts reported high rates of lifetime treatment or 12-step attendance, as well as high rates of abstinence from both alcohol and drugs (Table 1). Three quarters identified with being in recovery. Over half rated their QoL as very good.

**3.3.3. Secular class**—Relative to the 12-Step- Traditionalists and Enthusiasts, Secular members reported lower personal endorsement for alcohol or drug abstinence (Table 2.1); just over half indicated these elements definitely belong in their definition of recovery, and a minority reported that abstinence from non-prescribed drugs did not belong in the definition; however, one-fifth reported tolerance for abstinence (approximately 20% chose may belong in others' definition). Their personal endorsement of spirituality elements was also relatively low, as indicated by considerable proportions (one-third to one-half) using the may belong in others' response category for the three explicitly spiritual elements and over 15% rejecting (selecting does not belong) these elements (Table 2.2). This class is further distinguished by its relatively high personal endorsement for one unusual element (Table 2.5) - recovery is physical and mental in nature and has nothing to do with spirituality or religion - 44% thought it definitely belongs and 33% thought it somewhat belongs.

Secular members gave strong endorsement to most essential elements (nine of 15 elements were rated definitely belongs by >80%). Three essential elements were given less personal endorsement and greater may-belong responses (getting along with family and friends, being able to have relationships, and *having non-using friends around me*). Over 90% strongly endorsed half the elements in enriched recovery (the same four that the 12-step Enthusiasts endorsed), plus *developing inner strength* (Table 2.4).

Secular members were distinguished from other classes mostly by their younger age and fewer years in recovery (Table 1). Compared with 12-Step- Traditionalists and Enthusiasts, a higher proportion self-defined as used to have a problem and a lower proportion were currently abstinent from alcohol and drugs - just over a quarter were drug abstinent but drank alcohol. Although nearly two-thirds had ever attended treatment, a smaller proportion reported high lifetime 12-step attendance (90+ meetings) than either of the two 12-Step classes (33% vs. 85% & 88%). As well, a smaller proportion reported their QoL as very good.

**3.3.4. Self-Reliant class**—The majority of Self-Reliant members were personally supportive of abstinence from alcohol and non-prescribed drugs (Table 2.1). The majority endorsed spirituality elements in their definition, but about one in four chose may belong in others' for the explicitly spiritual elements (*feeling connected to a spiritual force*); the response choice 'somewhat belongs' dominated for four of seven spiritual elements.

Self-Reliant members reported relatively low endorsement for the essentials elements, with less than half strongly endorsing 12 of 15 elements (Table 2.3). However, relatively few reported that these elements did not belong in any definition of recovery. They were somewhat supportive of enriched recovery, as indicated by nearly half or more choosing somewhat belongs for 70% of these elements (Table 2.4). We labeled this class Self-Reliant based on their low endorsement for more relational elements (learning how to get support, helping others, giving back, being able to have relationships, and *having non-using friends*).

About two-thirds of the Self-Reliant members reported lifetime treatment and high 12-step group attendance (90+ meetings). As with other classes, the proportion with treatment exposure histories mirrored the proportion identifying as being 'in recovery.'

**3.3.5. Atypical class**—Support for abstinence in this class was mixed, with just over half (51% definitely) endorsing alcohol abstinence and fewer (41% definitely) endorsing abstinence from non-prescribed drugs, and considerable proportions reporting that these elements did not belong in any definition of recovery (Table 2.1). Atypical class members were mixed also in their support for spirituality elements as belonging in their definition, with fewer than half indicating the elements definitely or somewhat belong (Table 2.2); however, relatively large proportions expressed tolerance for them (about 30-44% chose may belong). They reported high intolerance for *recovery being religious in nature* (Table 2.4).

Atypical members did not report strong personal support for the essentials elements; only one item (*being able to enjoy life*) received strong support by more than half the members (Table 2.3). Instead, they chose other response categories—somewhat belongs (chosen by about one in four for most of these elements), may belong in other's definition (chosen by up to one-third for six elements), and does not belong in any definition (selected by about 25% for seven elements, with, for example, 35% reporting 'does not belong' for *getting along with family and friends* or being able to have relationships where I am not using people or being used. Atypical class members were also split in their endorsement of enriched recovery, especially for the elements *improved self-esteem* and *being someone people can count on*; for example, over one-fourth thought that the latter does not belong in any definition. The single most personally endorsed element was *process of growth and development*.

Atypical members reported treatment and self-help attendance at rates similar to Secular members (slightly lower than other classes): these two classes reported the highest relative rates for natural recovery (>10%). Over a quarter self-identified as used to have a problem and about one-third was not currently alcohol and drug abstinent—one-fourth was abstaining from drugs but drinking alcohol.

# 4. Discussion

The goal in this secondary analysis of the WIR data was to use mixture modeling to statistically test how participants clustered based on their responses to 39 recovery elements in order to obtain a better understanding of the diverse ways in which individuals define recovery. The underlying theory for finite mixture models assumes that the population of interest is not homogeneous but rather consists of heterogeneous subpopulations with varying parameters (McLachlan and Peel, 2000). We hypothesized that elements relating to abstinence and spirituality as well as social relationships would distinguish the resulting recovery profiles more so than other elements. That hypothesis, which was partially supported, is taken up below.

#### 4.1 Summarizing the profiles

A single class, the 12-Step Traditionalists, representing over half the sample reported the strongest personal endorsement for all recovery elements. This class, with strong endorsement for both the abstinence and the spiritual elements, reflects the beliefs seen in the 12-steps of Alcoholics Anonymous (Bloomfield, 1994; Room, 1993; White, 2006).

Two classes comprising about a third of the sample shared common patterns (but not level) of endorsement with 12-Step Traditionalists. Like the former, those in the 12-Step Enthusiast and Secular classes gave personal endorsement to most elements, but endorsement included fewer definitely belongs and more somewhat belongs. Unlike the Traditionalists, support for helping others, giving back, and being in relationships was not as strong for these two classes.

Although 12-Step Enthusiasts and Secularists were similar in some ways, the Enthusiasts were more classically "12-step oriented" (especially as indicated in the abstinence and spiritual factors), whereas members of the Secular class were more secular (especially as reflected in their strong endorsement for one unusual element, recovery is physical and mental in nature and has nothing to do with spirituality or religion), and less committed to abstinence as a component in their definition. This is consistent with the lower rates of treatment, 12-step attendance, and total abstinence among Secularist members (here 12-Step Traditionalists and 12-Step Enthusiasts are more alike). About 90% of the Secularists thought taking care of mental and physical health strongly belongs in their definition. This group may reflect broader societal trends in the meanings of recovery that have generalized beyond participation in self-help groups; such influences may derive from a more general emphasis on personal growth, health, and wellness that permeate contemporary culture and that have been adopted outside of a 12-step framework (Katz, 1993).

Self-Reliant members were unique in that personal endorsements were weighted more toward somewhat belongs, coupled with high tolerance for most elements. This suggests they may be viewed as more independent and less relational; this is consistent with their unenthusiastic endorsement for items tapping these traits.

Atypical members clearly stood apart from the other classes, first in being the least populated class, and secondly for having the lowest personal endorsements for most elements (and the highest tendency to report elements do not belong in a definition). This class appears to be less identified with traditional aspects of 12-step recovery. Although this class reported the highest natural recovery, the vast majority had sought out some type of help. Nearly one-third self-identified with used to have a problem and about as many were not currently abstinent – one-fourth were abstaining from drugs but drinking alcohol. Intolerance for spiritual elements, especially being open minded about spirituality, appreciating I am part of the universe and *being connected to a spiritual force*, was higher than any other classes. Like Self-Reliant members, they were less likely to personally endorse relational-type elements, for example getting along with family and friends and being someone people can count on. Atypical class members reported the most variance for the relational aspects of recovery, as indicated by similar (and relatively high) proportions showing tolerance for these elements. Aside from abstinence elements, only two other recovery elements were strongly endorsed by a majority in this class: process of growth and development and being able to enjoy life.

To summarize the classes, at the extremes are groups with 12-Step Traditionalist and Atypical definitions of recovery, other groups that are12-Step Enthusiasts or more secular in terms of how they define recovery, and another group that is more self-reliant in how it

views recovery. Self-identifying as "in recovery" does not imply homogeneity in terms of endorsement for an expansive or Traditionalist 12-step definition. Some such participants, for instance, are not as predisposed to see relational, self-reflective, or helping elements as belonging in their recovery definition. However, there is high tolerance for a more expansive definition, even in the group with the narrowest personal definition of recovery. Variables that often distinguish study samples in the addictions field, dependence severity and substance of choice, do not seem to distinguish these five clusters in terms of their recovery definitions.

The results of the latent class analysis clearly demonstrate the diversity of meanings, and varying degree of identification, with specific elements of recovery. While the degree of personal endorsement varied across the classes, four items (among the top ten ranking items in each class) were mentioned by all five classes: being honest with myself, handling negative feelings without using, being able to enjoy life, and process of growth and development. These particular items could be easily incorporated into clinical sessions focused on positive behavior change, used for goal setting, and operationalized as individualized objectives.

Adherence to abstinence and participation in social interactions through self-help were less central to beliefs about recovery among a minority of participants who were generally younger and had shorter recovery durations. This finding suggests that there may be an increasingly broader view of what constitutes recovery and that widespread cultural acceptance of the notion of "recovery" (as associated with personal growth) may be independent from a commitment to 12-step participation for some individuals. Other cultural/historical changes occurring in the United States, such as the increased availability, use, and abuse of prescription medications (McCabe et al., 2008) and growing acceptance of the legalization of marijuana, may influence beliefs about what constitutes recovery. The cross-sectional nature of the current study does not allow us to tease out the effects of historical changes in cultural influences on the meaning of recovery from those influences that derive from individual developmental processes associated with different pathways or longer duration of recovery, yet this would be an area of fruitful exploration. As suggested by (White, 2007) "multiple constituents" are invested in how recovery is defined and this has broad ramifications for professional, personal, and cultural processes related to how strategies to promote recovery are implemented.

As empirically shown, exposure to treatment and 12-step groups does not necessarily mean strict conformity to 12-step philosophy, nor does the use of the term "in recovery." This has implications for ROSC, as it suggests that caution is needed when invoking pre-conceptions about what recovery means to clients who may define themselves as being "in recovery" or have been to treatment or Alcoholics Anonymous or Narcotics Anonymous. We see high proportions (90% or more) of 12-step and treatment-exposed people in the Self-Reliant and Secular classes, and half the people in the Atypical class say they are "in recovery" even though only 13% are in natural recovery. The study findings can be used to inform the development of recovery-oriented systems of care by allowing for a better understanding of the diverse range of approaches to recovery and greater tolerance for varying beliefs about what constitutes recovery. Clinicians could administer the recovery elements to clients and

use their responses to determine how to best tailor their services. For example, a response pattern similar to the Self-Reliant class may suggest resistance to suggestions pertaining to social networks and social support; or answers consistent with the Secular class may point to a need for encouraging non-12-step support groups.

#### 4.2 Conclusions

Our empirical findings highlight specific areas that chronic care models such as ROSC (Clark, 2012) could address to promote individualized recovery. Importantly, individuals seeking help come with unique notions of recovery that should be recognized. Findings cannot be generalized to all recovering people as we do not know the denominator of this population (Kaskutas et al., 2014); class sizes may be a reflection of who responded to the survey and not representative of the universe of individuals who view themselves as having overcome substance use problems. Moreover, the study sample may have lacked sufficient variability in some socio-demographic characteristics to fully discern differences in these characteristics across the classes.

# Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

# Acknowledgments

The authors would like to acknowledge partners and participants of the "What Is Recovery?" study for their support and input, without which this study could not have been successful. This study was supported by NIAAA grant AA017954-01A1and NIDA grant P30-DA016383.

## References

Addenbrooke, M. Survivors of Addiction: Narratives of recovery. Routedge; New York: 2011.

- Best D, Gow J, Taylor A, Knox A, White W. Recovery from heroin or alcohol dependence: a qualitative account of the recovery experience in Glasgow. J Drug Issues. 2011; 41:359–377.
- Bloomfield K. Beyond sobriety: the cultural significance of Alcoholics Anonymous as a social movement. Nonprofit and Voluntary Sector Quarterly. 1994; 23:21–40.
- Clark, HW. A model for recovery-oriented systems of care from a national perspective; 13th annual NCRG Conference on Gambling and Addiction; Las Vegas, NV. 2012. September 30-October 2
- Dawson DA, Grant BF, Stinson FS, Chou PS, Huang B, Ruan WJ. Recovery from DSM-IV alcohol dependence -- United States, 2001-2001 (reprinted from Addiction vol. 100, pg. 281, 2005). Alcohol Res Health. 2006; 29:131–142.
- Hänninen V, Koski-Jännes A. Narratives of recovery from addictive behaviours. Addiction. 1999; 94:1837–1848. [PubMed: 10717962]
- Hser Y-I. Predicting long-term stable recovery from heroin addiction: findings from a 33-year followup study. J Addict Dis. 2007; 26:51–60. [PubMed: 17439868]
- Kaskutas LA, Borkman T, Laudet A, Ritter LA, Witbrodt J, Subbaraman M, Stunz A, Bond J. Elements that define recovery: the experiential perspective. J Stud Alcohol Drugs. 2014; 75:999– 1010. [PubMed: 25343658]
- Katz, AH. Self-help in America: A social movement perspective. Twayne Publishers; New York: 1993.
- Laudet, A. Faces and Voices of Recovery. Washington, DC: 2013. Life in Recovery Survey [Accessed: 2013-07-08. Archived by WebCite® at http://www.webcitation.org/6Hy1e1JAO]

- Laudet AB. What does recovery mean to you? Lessons from the recovery experience for research and practice. J Subst Abuse Treat. 2007; 33:243–256. [PubMed: 17889296]
- Laudet AB. The case for considering quality of life in addiction research and clinical practice. Addiction Science and Clinical Practice. 2011; 6:44–55. [PubMed: 22003421]
- Laudet AB, Becker JB, White WL. Don't wanna go through that madness no more: quality of life satisfaction as predictor of sustained remission for illicit drug misuse. Subst Use Misuse. 2009; 44:227–252. [PubMed: 19142823]
- Little, RJA.; Rubin, DB. Statistical Analysis with Missing Data. John Wiley & Sons; Hoboken, NJ: 2002.
- Lo Y, Mendell NR, Rubin DB. Testing the number of components in a normal mixture. Biometrika. 2001; 88:767–778.
- Lysaker P, Buck K. Moving toward recovery within clients' personal narratives: directions for a recovery-focused therapy. J Psychosoc Nurs Ment Health Serv. 2006; 44:28–35. [PubMed: 16475442]
- McCabe SE, Cranford JA, West BT. Trends in prescription drug abuse and dependence, co-occurrence with other substance use disorders, and treatment utilization: results from two national surveys. Addict Behav. 2008; 33:1297–1305. [PubMed: 18632211]
- McIntosh J, McKeganey N. Addicts' narratives of recovery from drug use: constructing a non-addict identity. Soc Sci Med. 2000; 50:1501–1510. [PubMed: 10741584]
- McLachlan, GJ.; Peel, D. Finite mixture models. Wiley & Sons; New York, NY: 2000.
- Muthén B, Muthén LK. Integrating person-centered and variable-centered analyses: growth mixture modeling with latent trajectory classes. Alcohol Clin Exp Res. 2000; 24:882–891. [PubMed: 10888079]
- Muthén B, Shedden K. Finite mixture modeling with mixture outcomes using the EM algorithm. Biometrics. 1999; 55:463–469. [PubMed: 11318201]
- Muthén, LK.; Muthén, B. Mplus version 5.1. Muthén & Muthén; Los Angeles, CA: 2008.
- Muthén, LK.; Muthén, BO. Mplus version 7.2. Muthén & Muthén; Los Angeles, CA: 2013.
- Nylund, KL.; Muthén, BO.; Asparouhov, T. Deciding on the number of classes in latent class analysis: a Monte Carol simulation study. Department of Advanced Quantitative Methods, Graduate School of Education and Information Studies, UCLA; Los Angeles, CA: 2004.
- Office of National Drug Control Policy. 2014; 3:6. ONDCP Recovery Update [Accessed: 2014-05-13. Archived by WebCite® at http://www.webcitation.org/6PYBfyUJA].
- Room, R. [Chapter 10] Alcoholics Anonymous as a social movement. In: McGrady, BS.; Miller, WR., editors. Research on Alcoholics Anonymous: Opportunties and alternatives. Rutgers Center of Alcohol Studies; New Brunswick, NJ: 1993. p. 167-187.
- Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, Hergueta T, Baker R, Dunbar GC. The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. J Clin Psychiatry. 1998; 59:22–23. [PubMed: 9881538]
- Subbaraman MS, Laudet AB, Ritter LA, Stunz A, Kaskutas LA. Multi-source recruitment strategies for advancing addiction recovery research beyond treated samples. J Community Psychol. in press.
- The Betty Ford Institute Consensus Panel. What is recovery? A working definition from the Betty Ford Institute. J Subst Abuse Treat. 2007; 33:221–228. [PubMed: 17889294]
- The WHOQOL Group. The World Health Organization quality of life assessment (WHOQOL): development and general psychometric properties. Soc Sci Med. 1998; 46:1569–1585. [PubMed: 9672396]
- Tims, FM.; Leukefeld, CG.; Platt, JJ. Relapse and recovery. In: Tims, FM.; Leukefeld, CG.; Platt, JJ., editors. Relapse and Recovery in Addictions. Yale University Press; New Haven, CT: 2001. p. 3-17.
- Vigilant LG. "I am still suffering:" the dilemma of multiple recoveries in the lives of methadone maintenance patients. Sociological Spectrum. 2008; 28:278–298.
- White, WL. Lets Go Make Some History: Chronicles of the new addiction recovery advocacy movement. Johnson Institute Foundation; Washington, DC: 2006.

- White WL. Addiction recovery: its definition and conceptual boundaries. J Subst Abuse Treat. 2007; 33:229–241. [PubMed: 17889295]
- White, WL. Peer-based Addiction Recovery Support: History, theory, practice and scientific evaluation. Great Lakes Addiction Technology Transfer Center; Kansas City, MO: 2009. http://courts.oregon.gov/DHS/addiction/recovery/peer-addiction-recovery-support.pdf accessed 08/02/2010
- White WL, Boyle M, Loveland D. Alcoholism/addiction as a chronic disease: from rhetoric to clinical reality. Alcohol Treat Quart. 2002; 20:107–129.

#### Table 1

Background characteristics by latent class membership.

( <b>n</b> )	12-step Traditionalist (4,912)	12-step Enthusiast (2,014)	Secular (980)	Self-reliant (1,040)	Atypical (382)	Tota (9,328)
	%	%	%	%	%	%
Female	58	51	55	48	44	54
Age >35	83	83	69	83	80	82
Any Education beyond High School	87	88	91	92	90	89
M.IN.I. dependence disorder	98	98	97	96	93	98
Primary substance of choice						
Alcohol only	57	61	60	63	63	59
Drug only	39	34	35	31	30	30
None	5	4	4	6	8	4
Personal self-defined recovery status						
In recovery	82	77	60	65	49	7:
Recovered	12	13	15	17	18	13
Used to have a problem	5	7	20	15	29	
Medication assisted	2	3	5	3	5	
Lifetime treatment and/or self-help						
None/natural recovered	2	3	10	6	13	
12-step only	15	15	11	17	17	1
Treatment only	1	<1	3	2	2	
Treatment & 12 step	48	47	24	37	26	4
Non-12 step only	1	1	4	2	2	
Non-12 step & treatment	<1	1	2	1	1	
12-step & non-12 step	8	8	12	10	11	9
12-step & non-12 step & treatment	27	25	34	25	28	2
>90 lifetime 12-step meetings attended	85	80	38	65	46	7.
Duration of recovery status						
< 1 year	13	13	27	15	18	1:
1-5 years	28	29	36	29	29	29
>5 years	59	58	37	59	53	50
Current use						
Alcohol & drug abstinent	91	85	61	77	68	84
Alcohol-only abstinent	2	3	4	4	2	1
Drug-only abstinent	6	10	27	15	24	1
Alcohol & drug use	1	2	7	4	6	2
Quality of Life rating (QoL)						
Poor	2	2	5	2	3	2
Neither	7	9	16	11	13	9
Good	34	36	42	38	36	36

(n)	12-step Traditionalist (4,912)	12-step Enthusiast (2,014)	Secular (980)	Self-reliant (1,040)	Atypical (382)	Total (9,328) <sup>a</sup>
	%	%	%	%	%	%
Very good	58	53	38	49	48	53

a13 cases were dropped in the LCA due to missing data on all elements.

Abstinence<sup>*a*</sup>: element endorsement by class membership.

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypical
Elements	Rating <sup>b</sup>	%	%	%	%	%
No alcohol use	Definitely	87	80	61	67	51
	Somewhat	4	7	14	14	10
	May	4	7	20	14	27
	Does not	5	6	6	5	13
No abuse of prescribed drugs	Definitely	84	77	72	66	55
	Somewhat	4	7	10	14	9
	May	5	8	10	14	22
	Does not	7	8	8	7	15
No use of non-prescribed	Definitely	72	65	52	57	41
drugs	Somewhat	8	11	14	16	14
	May	9	12	21	18	23
	Does not	11	12	13	9	22

 $^{a}\ensuremath{\mathsf{This}}$  CFA component label was established in a prior analysis.

<sup>b</sup>Definitely belongs in your definition of recovery, somewhat belongs in your definition of recovery, does not belong in your definition of recovery, but may belong in other people's definition of recovery, or does not really belong in a definition of recovery.

Spirituality<sup>*a*</sup>: element endorsement by class membership.

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypica
Elements	Rating <sup>a</sup>	%	%	%	%	%
Being grateful	Definitely	100	93	71	51	23
	Somewhat	<1	6	23	41	23
	May	0	<1	5	7	28
	Does not	0	<1	1	<1	20
Appreciating I am part of	Definitely	97	75	37	30	1
universe	Somewhat	2	23	35	44	14
	May	<1	2	19	23	3
	Does not	<1	<1	9	3	4
Helping others not drink or	Definitely	96	71	37	35	2
use drugs	Somewhat	4	26	41	44	2
	May	<1	3	18	19	3
	Does not	<1	<1	4	2	2
bout giving back	Definitely	99	80	47	30	1:
	Somewhat	1	19	38	7 30 8 54	1
	May	<1	1		15	4
	Does not	0	<1	3	1	2
Feeling connected to a	Definitely	91	74	3	33	1
spiritual force	Somewhat	7	24	22	33	14
	May	2	2	52	27	2
	Does not	<1	<1	23	7	4
Open-minded about	Definitely	93	69	9	24	
spirituality	Somewhat	5	26	37	44	1
	May	1	4	38	27	3
	Does not	<1	1	16	4	4
Spiritual in nature & not	Definitely	79	68	13	39	2
religious	Somewhat	12	22	33	33	1
	May	7	8	36	24	3
	Does not	2	2	18	4	2

<sup>b</sup>Definitely belongs in your definition of recovery, somewhat belongs in your definition of recovery, does not belong in your definition of recovery, but may belong in other people's definition of recovery, or does not really belong in a definition of recovery.

 $^{a}$ This CFA component label was established in a prior analysis.

Essentials of recovery<sup>*a*</sup>: element endorsement by class membership.

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypica
Elements	Rating <sup>a</sup>	%	%	%	%	9/
Being honest with myself	Definitely	100	96	96	72	4
	Somewhat	<1	4	4	27	2
	May	0	<1	<1	1	1
	Does not	0	<1	<1	<1	1
Changing the way I think	Definitely	99	85	88	43	2
	Somewhat	<1	13	11	50	2
	May	<1	1	1	7	2
	Does not	<1	<1	0	<1	1
Realistic appraisal of my	Definitely	98	73.	82	30	2
abilities	Somewhat	1	24	15	60	2
	May	<1	2	3	8	2
	Does not	<1	<1	<1	2	2
Handling negative feelings w/o using	Definitely	100	92	93	60	4
	Somewhat	<1	7	6	33	2
	May	<1	<1	1	6	2
	Does not	<1	<1	0	1	1
Dealing with mistakes	Definitely	97	81	74	41	2
	Somewhat	1	16	18	48	2
	May	<1	2	6	18 48   6 10	3
	Does not	1	1	2	2	1
Being able to deal with	Definitely	99	74	72	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1
situations	Somewhat	1	24	22	63	2
	May	0	2	5	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3
	Does not	0	<1	1		2
Striving to be consistent	Definitely	99	74	80	31	1
	Somewhat	1	23	17	54	2
	May	<1	2	2	13	2
	Does not	<1	1	1	2	2
Being able to enjoy life	Definitely	99	92	91	68	5
	Somewhat	<1	7	7	27	2
	May	<1	<1	2	5	1
	Does not	<1	<1	<1	<1	
Freedom from feeling sick	Definitely	98	78	86	46	3
	Somewhat	1	15	8	32	1
	May	1	5	5	18	2
	Does not	<1	2	1	3	1

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypica
Elements	Rating <sup>a</sup>	%	%	%	%	%
	Somewhat	2	17	10	41	24
	May	<1	2	2	10	2
	Does not	<1	1	<1	1	1
Taking care of my mental health	Definitely	99	80	90	38	2
	Somewhat	1	17	8	53	3
	May	<1	2	1	9	2
	Does not	<1	1	<1	<1	1
Trying to live in "clean" space	Definitely	90	57	66	27	1
	Somewhat	6	26	18	37	1
	May	3	13	13	28	3
	Does not	1	3	3	8	3
Getting along with family &	Definitely	95	57	61	22	
friends	Somewhat	5	37	30	59	2
	May	<1	4	7	<1 <1 66 27 18 37 13 28 3 8 61 22 30 59	3
	Does not	<1	2	2		3
Being able to have	Definitely	98	71	64	22	1
relationships	Somewhat	1	25	22	55	1
	May	<1	4	11	21	3
	Does not	0	1	3	3	3
Having non-using friends	Definitely	96	71	56	31	1
around me	Somewhat	4	24	30	49	2
	May	<1	4	11	18	3
	Does not	<1	1	2	2	2

<sup>b</sup>Definitely belongs in your definition of recovery, somewhat belongs in your definition of recovery, does not belong in your definition of recovery, but may belong in other people's definition of recovery, or does not really belong in a definition of recovery.

 $^{a}$ This CFA component label was established in a prior analysis.

Enriched recovery  $a^{a}$ : element endorsement by class membership.

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypica
Elements	Rating <sup>a</sup>	%	%	%	%	9
Process of growth & development	Definitely	100	97	96	78	5
development	Somewhat	0	3	3	2	2
	May	0	<1	1	1	1
	Does not	0	<1	<1	<1	
Developing inner strength	Definitely	98	82	92	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3
	Somewhat	1	15	8	45	3
	May	<1	2	<1	7	2
	Does not	<1	1	<1	1	1
Having tools for inner peace	Definitely	99	89	86	44	2
	Somewhat	<1	10	11	47	3
	May	<1	1	2	6	2
	Does not	<1	<1	1	<1	1
Improved self-esteem	Definitely	99	79	87	35	2
	Somewhat	1	19	11	54	2
	May	<1	2	1	10	2
	Does not	0	<1	1	1	2
eacting in more balanced way	Definitely	99	93	97	63	2
	Somewhat	<1	7	2	2 34 <1 2	3
	May	0	<1	<1		1
	Does not	<1	<1	<1	<1	1
Taking responsibility	Definitely	99	94	95	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	4
	Somewhat	<1	5	4		2
	May	<1	1	<1		1
	Does not	<1	<1	<1	<1	1
Living a life that contributes	Definitely	100	90	91	50	3
	Somewhat	<1	9	8	45	2
	May	0	1	1	5	2
	Does not	0	0	<1	<1	
Being someone people count	Definitely	98	73	79	32	2
on	Somewhat	2	24	17	55	2
	May	<1	2	3		2
	Does not	<1	1	1		2
Taking care of my physical	Definitely	97	72	89		3
health	Somewhat	3	26	9		3
	May	<1	2	1	7	2
	Does not	0	<1	<1	<1	1
Learning how to get support	Definitely	96	72	76	34	2

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypical
Elements	Rating <sup>a</sup>	%	%	%	%	%
I need	Somewhat	3	24	17	53	30
	May	1	3	6	12	32
	Does not	<1	1	1	1	15

<sup>b</sup>Definitely belongs in your definition of recovery, somewhat belongs in your definition of recovery, does not belong in your definition of recovery, but may belong in other people's definition of recovery, or does not really belong in a definition of recovery.

 $^{a}$ This CFA component label was established in a prior analysis.

#### Page 21

#### Table 2.5

Unusual<sup>*a*</sup> elements: endorsement by class membership.

		12-step Traditionalist	12-step Enthusiast	Secular	Self- Reliant	Atypical
Elements	Rating <sup>a</sup>	%	%	%	%	%
Non-problematic alcohol or	Definitely	19	15	28	17	27
drug use	Somewhat	4	7	14	12	14
	May	14	18	23	21	18
	Does not	63	60	36	50	41
No use of tobacco	Definitely	21	14	22	14	14
	Somewhat	15	13	13	15	ç
	May	30	33	30	35	32
	Does not	34	40	35		45
Religious in nature	Definitely	13	9	2	4	4
	Somewhat	13	17	6	13	4
	May	38	41	45	47	28
	Does not	35	33	47	37	62
Physical and mental in nature	Definitely	10	4	44	13	34
and has nothing to do with spirituality or religion	Somewhat	10	14	33	25	15
	May	37	44	18	37	20
	Does not	43	38	5	3	25

<sup>b</sup>Definitely belongs in your definition of recovery, somewhat belongs in your definition of recovery, does not belong in your definition of recovery, but may belong in other people's definition of recovery, or does not really belong in a definition of recovery.

 $^{a}$ This label was established in a prior analysis.