

Special Section: Defining and Measuring “Recovery”
Special article

What is recovery? A working definition from the Betty Ford Institute
The Betty Ford Institute Consensus Panel[☆]

Received 16 February 2007; received in revised form 4 June 2007

Abstract

There is an unknown but very large number of individuals who have experienced and successfully resolved dependence on alcohol or other drugs. These individuals refer to their new sober and productive lifestyle as “recovery.” Although widely used, the lack of a standard definition for this term has hindered public understanding and research on the topic that might foster more and better recovery-oriented interventions. To this end, a group of interested researchers, treatment providers, recovery advocates, and policymakers was convened by the Betty Ford Institute to develop an *initial* definition of recovery as a starting point for better communication, research, and public understanding. Recovery is defined in this article as *a voluntarily maintained lifestyle composed characterized by sobriety, personal health, and citizenship*. This article presents the operational definitions, rationales, and research implications for each of the three elements of this definition. © 2007 Published by Elsevier Inc.

Keywords: Recovery; Addiction; Substance use disorders; Addiction treatment

1. Introduction

Individuals who are “in recovery” know what it means to them and how important it is in their life. They do not need a formal definition. However, *recovery* is not clear to the public, to those who research and evaluate addiction treatments, and to those who make policies about addiction. Indeed, there is reason to believe that there is no complete consensus on the definition even among those in recovery (see [Laudet, 2007](#); [Laudet, Morgen, & White, 2006](#)).

A commonly accepted and operationally defined measure of recovery could lead to improved research and understanding in the addiction field. For example, we do not definitively know what role formal treatment plays in initiating or sustaining recovery. Many formerly dependent individuals enter recovery without addiction treatment, using only Alcoholics Anonymous (AA) and 12-step activities—

and some without any assistance (see [Humphreys et al., 2004](#); [Sobell, Ellingstad, & Sobell, 2000](#)). In addition, research on therapeutic community and social model forms of treatment over the past 30 years had also produced well-formed theoretical models and explicit methods by which substance-dependent individuals have become abstinent and associated with reduced crime and improved employment rates (see [Borkman, Kaskutas, Room, & Ma, 1998](#); [De Leon, 2000](#); [Flynn, Joe, Broome, & Simpson, 2003](#)).

Despite their importance, these models do not all share the same measures or even the same underlying concepts of what they all refer to as “recovery.” Thus, we have little to tell families, employers, schools, payers, and policymakers about how they can support and extend the recovery process. Also, despite the many successes within the treatment field in helping addicted individuals initiate recovery, it is presently not possible to tell treatment providers the best ways to foster recovery ([McLellan & Weisner, 1996](#)). Without a consensus definition of recovery that will permit systematic measurement, there will likely be no research to inform these issues.

A second reason to define and study recovery is that it may have value beyond addiction (see [American Psychiatric Association \[APA\], 2005](#); [Anthony, Gagne, & White, 2007](#); [Deegan, 1988](#); [Department of Health and Human Services,](#)

[☆] Members are listed alphabetically in the Appendix.

This work was supported by the Betty Ford Center and the Treatment Research Institute.

Corresponding authors. John Schwarzlose, M.S., is to be contacted at Betty Ford Center, 3900 Bob Hope Drive, Rancho Mirage, CA 92270. A. Thomas McLellan, Ph.D., Treatment Research Institute, 600 Public Ledger Bldg., 150 Independence Mall, Philadelphia, PA 19106, USA.

2003). Of course, the word *recovery* has been widely used throughout health care. Individuals suffering from other chronic illnesses also want more than just symptom remission from their health care: They want improved function and a satisfying quality of life (QOL; see Breslow, 2006; Galanter, 1997; Institute of Medicine, 2006; Ware, Hopper, Tugenber, Dickey, & Fisher, 2007). This has been recognized within the National Institutes of Health (NIH) in its efforts to include common measures of “wellness” and “quality of life” in clinical trials for many illnesses (see Reeve, 2007; NIH Patient-Reported Outcomes Measurement Information System at <http://www.nihpromis.org>). Thus, the study of recovery in the addiction field may be illuminated by what we have learned from other disorders. For example, maintaining healthy, stress-free, and socially productive lifestyles appears to offer protective factors in other medical and mental health conditions (Breslow, 2006).

1.1. The consensus process

With this as background, the Betty Ford Institute (BFI) invited a group of 12 concerned and experienced individuals (hereafter called the *consensus panel*) representing addiction treatment, policy, and research—several of whom were themselves in stable recovery—to develop a consensus definition that might serve as a starting point for open communication and improved understanding about this important concept. The consensus process started with the commissioning of articles (see this issue) designed to frame some of the important issues in defining this complex concept. These articles were presented to the members of the consensus panel before a 2-day conference, held in September 2006 on the grounds of the Betty Ford Center in Rancho Mirage, California. At that conference, the panel members heard abbreviated presentations of the articles and debated on each of the important components of the definition. The process was professionally facilitated by Erica Goode, a science writer from the *New York Times*, to ensure full coverage of the topic.

By the end of the conference, a working draft definition was formulated and circulated for additional comments from all members of the panel. It was agreed from the outset that there would be no attempt to force a consensus. In the end, there was no issue requiring a minority position and consensus (11 voting affirmative and 1 abstaining) was achieved on the definition subsequently discussed.

We present the three-part consensus definition, which is followed by the orienting premises and rationale for each of the definition’s components. It is emphasized that this definition does not necessarily represent the views of the Betty Ford Center, the treatment provider community, and especially the recovering community. Furthermore, the definition is not based on a consensus interpretation of available evidence, as most researchers would wish. That body of scientific evidence does not yet exist—in part because there has been no agreed-upon starting point for the research.

2. The definition

Recovery from substance dependence is a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship.

2.1. Sobriety

Sobriety refers to abstinence from alcohol and all other nonprescribed drugs.

This criterion is considered to be primary and necessary for a recovery lifestyle. Evidence indicates that for formerly dependent individuals, sobriety is most reliably achieved through the practice of abstinence from alcohol and all other drugs of abuse.

Early sobriety = 1–11 months; *sustained sobriety* = 1–5 years; *stable sobriety* = 5 years or more.

2.2. Personal health

Personal health refers to improved quality of personal life as defined and measured by validated instruments such as the physical health, psychological health, independence, and spirituality scales of the World Health Organization QOL instrument (WHO-QOL Group, 1998a,b).

2.3. Citizenship

Citizenship refers to living with regard and respect for those around you as defined and measured by validated instruments such as the social function and environment scales of the WHO-QOL instrument (WHO-QOL Group, 1998a,b).

Criteria 2 and 3 extend sobriety into the broader concept of recovery. Personal health and citizenship are often achieved and sustained through peer support groups such as AA and practices consistent with the 12 steps and 12 traditions.

3. General premises guiding the consensus definition process

3.1. Recovery is not simply sobriety

Although sobriety is considered to be necessary for recovery, it is not considered as sufficient. Recovery is recognized universally as being multidimensional, involving

more than simply the elimination of substance use (see De Leon, 2000; Kurtz, 1979; Laudet, 2007; Laudet et al., 2006; Tiebout, 1953; White, 2006, 2007). The additional health and social aspects of recovery are potentially quite important to the prevention of relapse and may be the most attractive aspects of recovery to affected individuals, their families, and society as a whole.

3.2. Recovery as a personal condition, not a specific method

This was a particularly important premise, governing several important decisions on elements of the definition. It would have been easiest to define recovery as “abstinence attained through adherence to 12-step principles.” Such an approach would have the advantage of describing recovery in the most familiar methods presently used to attain it. However, it would essentially freeze the concept in time and stipulate a requirement for full and active participation in AA and 12-step activities as the way to attain recovery. No individual or group has the authority to represent AA or other 12-step organizations on such a position. On conceptual grounds, even the founders of AA recognized that there were many paths to the same position (AA World Services, 1939/2001; Cheever, 2004) and did not suggest that their specific methods were the only means to attain the overall goal. Indeed, one of the important purposes of this initial definition is to promote exploration of different ways to achieve recovery.

3.3. Recovery from addiction, not general recovery

Although the term *recovery* is not unique to the addiction field, the consensus panel decided to focus on recovery from addiction as this was the focus of our interest and experience. It is not known whether recovery from addiction is similar to or different from recovery from other illnesses (see Anthony et al., 2007; APA, 2005; Deegan, 1988; Department of Health and Human Services, 2003). It is hoped that the current definition will promote research in this important area.

In this regard, it should be noted that recovery as it is used here is only intended to apply to those who once met the diagnostic criteria for substance abuse or dependence (see APA, 2000, *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*). Very simply, people cannot be in recovery from a serious substance use disorder if they never met *DSM-IV* criteria for the disorder in the first place.

3.4. A starting point, not a final definition

The consensus panel did not intend or expect to produce the final definition of recovery. As concerned and involved members of the addiction field, the panel participants attempted to represent the best available data, thinking, and accrued wisdom as a starting point for communication,

exploration, and refinement of the recovery concept. Thus, it is expected that this definition will evolve with comments from the recovering community, treatment providers, and policymakers, as well as from new research findings that should follow this definition. Just as *DSM* diagnoses have been changed four times since the original criteria were provided, there may be many future editions of a recovery definition. However, we hope that future definitions of recovery will be informed by research made possible by the initial definition.

4. Rationale for specific elements of the definition

4.1. Voluntary

Although there are many periods of forced abstinence, such as during incarceration or coerced treatment, the consensus panel agreed that one of the key elements of recovery is the willing and voluntary pursuit of behaviors that constitute recovery.

4.2. Maintained lifestyle

The phrase *maintained lifestyle* reflects recognition that recovery is more than just a state of being at a moment in time but that it is also not necessarily a permanent state. Recovery status may change without active management to sustain it (see De Leon, 2000; Simpson, 2004; Scott, Foss, & Dennis, 2005). Most of those in recovery convey this by describing themselves as being “recovering” or “in recovery” rather than “recovered.” Thus, the consensus panel considered recovery to be best represented as a maintained lifestyle.

5. Rationale for the three components of recovery

The consensus panel agreed on three components to capture the overall concept of recovery (i.e., sobriety, personal health, and citizenship) and turned to well-developed and widely used measures to better specify each of these components.

5.1. Sobriety

Sobriety is defined as “abstinence from alcohol and all other nonprescribed drugs.” This was considered as the cardinal feature of a recovery lifestyle. In turn, several underlying issues were negotiated to specify this component.

5.1.1. Time frame

The consensus panel attempted to convey the importance of sobriety stability as a likely indicator of resilience to relapse. However, there is no empirically established or widely agreed-upon time frame for describing the stability of sobriety (see Dennis, Scott, Funk, & Foss, 2005; Moos & Moos, 2006). Adopting and extending some of the language

and concepts from contemporary diagnostic thinking (see APA, 2000, *DSM-IV-TR*) about “remission” from substance use disorders, the panel agreed on the following adjectives as a first effort to describe the duration and perhaps the stability of sobriety:

- early sobriety* – sobriety (by the current definition) lasting for at least 1 month but less than 1 year;
- sustained sobriety* – sobriety (by the current definition) lasting for at least 1 year but less than 5 years; and
- stable sobriety* – sobriety (by the current definition) lasting for at least 5 years.

These adjectives and the suggested time frames were derived in part from the meager research literature on this topic but primarily from the common experience of those in recovery. It remains an open question whether these time frames capture true differences in relative risk for relapse and whether they are associated with different levels of development in the other components of recovery.

5.1.2. Sobriety sustained by medications

There has been no consensus even within the recovering community about the role of “medication-assisted recovery.” There appears to be essentially full agreement that formerly dependent individuals who are abstinent from all drugs of abuse but take, for example, insulin for diabetes or diuretics for hypertension still meet contemporary views about being in recovery. There does not appear to be agreement regarding whether those whose use of alcohol has been blocked by naltrexone, acamprosate, or disulfiram (Rychtarik, Connors, Demen, & Stasiewicz, 2000) are also considered to be in recovery. Finally, it appears that only few of those presently in recovery within the United States consider individuals whose illicit opioid use is blocked by buprenorphine or methadone to be in recovery (Murphy & Irwin, 1992; White & Coon, 2003). However, it should be noted that many persons outside the United States who are maintained on methadone or buprenorphine consider themselves to be in medication-assisted recovery (see Laudet, 2007).

Again, the panel’s intent with this definition was to characterize the condition of recovery, not the method by which one attains it. Thus, it was the consensus that those who are abstinent from alcohol, all illicit drugs, and all nonprescribed or misprescribed medications would qualify for this component of the definition regardless of whether those behaviors were being maintained by a medication, a form of unforced outpatient treatment, support from a recovering peer group, or some alternative lifestyle. To be explicit, formerly opioid-dependent individuals who take naltrexone, buprenorphine, or methadone as prescribed and are abstinent from alcohol and all other nonprescribed drugs would meet this consensus definition of sobriety. Similarly, alcohol-dependent individuals who take acamprosate or naltrexone as prescribed, to reduce cravings for alcohol, but are abstinent from alcohol and all other nonprescribed drugs

would also meet this consensus definition of sobriety. Obviously, those who continue to meet the criteria for a substance use disorder despite taking a prescribed medication would not meet this consensus definition of sobriety.

5.1.3. The special case of tobacco

Although tobacco dependence is among the most pervasive and serious public health problems facing this country and many others (Danaei, VanderHoom, Lopez, Murray, & Ezzati, 2005; Rosner & Stamfer, 2006), many of those who have successfully become abstinent from alcohol and other drugs have not attempted or sustained abstinence from tobacco products (cigarettes, chewing tobacco, and snuff). Indeed, there are significant rates of emphysema, cancer, and other terminal health conditions associated with these products among those otherwise in recovery (Grant, Hasin, Chou, Stinson, & Dawson, 2005).

For these reasons, the consensus panel wanted very much to include tobacco products in the list of substances that are part of the sobriety component of this recovery definition. However, it was recognized that traditional concepts of sobriety and recovery have been silent on tobacco use; thus, including tobacco in the sobriety component would disqualify many of those who now consider themselves to be in recovery. As such, for the time being, the consensus panel considered it best to remain silent on tobacco use within the sobriety component of the recovery definition. It is admitted that there is no clinical justification for this position. This is an aspect of sobriety that the recovering and the addiction treatment communities must embrace on behalf of public health.

5.2. Personal health

The consensus panel understood that these additional components of the recovery definition may be particularly important to the recovering individual and to families and society. There are many other illnesses in which a reduction of presenting symptoms is seen as necessary but not sufficient to produce return of function (see Institute of Medicine, 2006). Indeed, this sentiment has been captured by the WHO in its definition of health as a “...a state of complete physical, mental, and social well-being, not merely the absence of disease” (WHO, 1985, p. 34). More recently, the NIH has incorporated three domains into its working definition of health: physical health (including function and symptoms), mental health (emotional distress, cognitive function, and psychological function), and social health (role participation and social supports; see NIH PROMIS at <http://www.nihpromis.org>; Reeve, 2007).

5.3. Citizenship

The word *citizenship* has not been routinely used in the context of recovery and has sometimes had a political connotation. However, as suggested in Wikipedia (<http://>

www.wikipedia.org/), citizenship “...implies working towards the betterment of one’s community through participation, volunteer work, and efforts to improve life for all citizens.” We believe this captures important traditional recovery elements such as “giving back.”

For the sake of greater specificity, there was the wish to ground personal health and citizenship in previously validated conceptual domains and criteria, with validated assessment tools to measure them. However, there is currently no single instrument in our field to adequately measure all the elements within these two critical constructs. Nonetheless, the panel felt that it was preferable to first disseminate the preliminary consensus definition and stimulate productive debate toward refining that definition.

Outside the addiction field, other areas of health care are increasingly embracing the concept of QOL as a bona fide outcome domain and clinical goal. Quality of life is a multidimensional construct generally measured in terms of physical, mental, and social health—many of the constructs the panel sought to capture in the last two components of the recovery definition. Generic QOL instruments encompass measures of positive health and social functioning as well as life satisfaction.

In this regard, the WHO-QOL is becoming the leading generic QOL measure, increasingly used worldwide in biomedical research, including clinical trials. The full instrument, the WHO-QOL-100 (Murphy, Herrman, Hawthorne, Pinzone, & Evert, 2000; WHO-QOL Group, 1995, 1998a,b), and the abbreviated WHO-QOL-BREF (26 items) offer multidimensional cross-culturally valid assessments of four dimensions: physical health, mental health, social health, and environment (e.g., living context, personal safety, opportunity for leisure and learning, as well as access to and quality of care). The WHO-QOL instruments are in the public domain, with available published norms for healthy and “ill” populations in more than 15 countries (WHO-QOL Group, 1998a,b; also see Skevington, Lotfy, & O’Connell, 2004).

Thus, selected scales from the WHO-QOL may be suitable assessment tools for some aspects of the personal health and citizenship dimensions of recovery as defined in this article. At the same time, there are many other validated instruments and scales that measure the domains making up personal health and citizenship. New measures of these domains are also under development through the NIH PROMIS effort (see NIH PROMIS at <http://www.nihpromis.org>; Reeve, 2007). It is hoped that the specification of these two domains with operational definitions rooted in this generic instrument example will lead the way for testing of additional measures.

5.3.1. Threshold scoring?

Unlike the sobriety component, which has a clear and dichotomous measurement threshold (abstinence as defined: *yes* or *no*), there is no threshold determination of “problem status” with regard to the personal health and citizenship

domains. The consensus panel thus agreed to accept improvement in these domains, measured against a pre-recovery period of substance use. Again, one goal of this definition is to foster the kind of research that will provide empirically derived threshold guidelines for “normal function” on these domains.

6. Discussion

Recovery may be the best word to summarize all the positive benefits to physical, mental, and social health that can happen when alcohol- and other drug-dependent individuals get the help they need. Those who are in recovery are typically sober, working, and tax-paying parents and neighbors. These are the types of personal and social qualities that one might reasonably take pride in and publicly announce if one were seeking elected office or a position of responsibility within a corporation or community. Instead, this term (i.e., *in recovery*) has marginal social status and even more uneasy optimism associated with it than, for example, the term *cancer survivor*.

It is interesting in this regard that there is an operational definition for cancer survivors. Based on prospective follow-up studies of cancer patients, those who are living symptom free for 5 years after a cancer diagnosis appear to have reached a period of significantly reduced risk for relapse and are thus termed *survivors* (Reis et al., 2003; Rowland, 2004). “Survival rates” are now tracked regularly and publicly in professional journals and in the popular press. Improvement in survival rates is part of the national health strategy for 2010 (see *Healthy People 2010, 2000*, Objectives 3–15). The pink ribbon has become a widely used public symbol of support for breast cancer survivors and for increased research and treatment in that field. Perhaps most importantly, public discussion of survival rates has increased the proportion of individuals willing to get early screening for the illness and to take preventive measures (see *Centers for Disease Control and Prevention, 2004*).

6.1. Issues facing the field regarding recovery

Unlike the term *cancer survivor*, the term *in recovery* has not been operationally defined by the addiction treatment and research communities and, consequently, is not well understood by the public. There is as yet no threshold point that conveys significantly reduced levels of relapse risk. It was the hope of the BFI Consensus Panel that the preceding definition of recovery might be the beginning of a similar course of events in the addiction field. If recovery can be effectively captured, distilled, and communicated, it can come to be expectable by those now suffering from addiction. Recovery could then also be studied from an economic perspective, using standard procedures. This could lead to more realistic public perceptions of the true worth of recovery that payers might come to value and invest in.

However, there is much that must occur for this or any definition of *recovery* to have the kind of broad impact that *survivor* has had in the cancer field. Within the current definition, we have simply reached consensus on key concepts. We do not yet have the research evidence to establish the clinical importance of or the parameters for these concepts. For example, do those who have *stable sobriety* have a significantly better chance of remaining sober and productive in the next year than those who have *sustained sobriety*? Is the appropriate threshold 1, 3, 5, or more years? Is medication-assisted sobriety more or less likely to result in stable sobriety than efforts that do not involve medications? Are those who have achieved abstinence from their primary drug problem but are still smoking less likely to sustain that abstinence than those who have also quit smoking? What is the role of personal health and citizenship in sustaining sobriety?

The recovery definition may have special significance for the treatment field. The broad and inclusive definition of recovery might form the basis for unrealistic expectations from a treatment industry that has been severely and adversely affected by budgetary restrictions and managed care (see [Institute of Medicine, 2006](#)). Conversely, there have been suggestions from the many individuals who attained recovery through mutual support groups or other informal methods that treatment is not necessary for recovery. What *are* appropriate expectations for the treatment field in terms of this definition of recovery?

In fact, the consensus panel does not pretend to know the answer to this question. Again, the decision to focus on defining the *state* of recovery rather than the *process* by which one attains that state was quite purposeful. This definition was designed purposely as an operational definition of what we believe is both a desirable and achievable state for those who now suffer from addiction. It is an open but hopefully empirical question as to which kinds of treatments or other interventions delivered for what amount of time and to which “types” of addicted individuals will lead to what level and duration of sobriety, personal health, and citizenship. It is the earnest hope of the BFI Consensus Panel that this initial definition will provide a starting point for more extended research and clinical efforts to answer these and other questions.

Appendix A. Items on the WHO-QOL scales referenced in the definition

The BFI Consensus Panel – The BFI at the Betty Ford Treatment Center is a not-for-profit institute created to conduct and support collaborative programs of research, education, and policy development that lead to a reduction of the devastating effects of substance use disorders on individuals, families, and communities.

Charlene Belleau

Manager, Assembly of First Nations

Robert L. DuPont, M.D.

Director, Institute for Behavior and Health

Carlton K. Erickson, Ph.D.

Director, Addiction Science Research and Education Center, University of Texas

Michael T. Flaherty, Ph.D.

Executive Director, Institute for Research, Education, and Treatment of Addiction

Marc Galanter, M.D.

Professor of Psychiatry and Director, Division of Alcoholism and Drug Abuse, New York University

Mark Gold, M.D.

Distinguished Professor and Chief, McKnight Brain Institute, University of Florida

Lee Ann Kaskutas, Dr.P.H.

Alcohol Research Group, University of California at Berkeley

Alexandre Laudet, Ph.D.

Director, Center of Study of Addictions and Recovery, National Development and Research Institutes

Carol McDaid

Principal, Capitol Decisions Consulting Group

A. Thomas McLellan, Ph.D.

CEO, Treatment Research Institute

Jon Morgenstern, Ph.D.

Vice President for Research, National Center on Substance Abuse and Addiction at Columbia University

Eugene Rubin, M.D., Ph.D.

Department of Psychiatry, School of Medicine, Washington University in St. Louis

John Schwarzlose, M.S.

CEO, Betty Ford Center

William White, M.A.

Senior Research Consultant, Chestnut Health Systems

A.1. Level of independence questions

F9.1 (F11.1.1): How well are you able to get around?

F9.2 (F11.2.1): How satisfied are you with your ability to move around?

F9.3 (F11.2.2): How much do any difficulties in mobility bother you?

F9.4 (F11.2.3): To what extent do any difficulties in movement affect your way of life?

F10.1 (F12.1.1): To what extent are you able to carry out your daily activities?

F10.2 (F12.1.3): To what extent do you have difficulty in performing your routine activities?

F10.3 (F12.2.3): How satisfied are you with your ability to perform your daily living activities?

F10.4 (F12.2.4): How much are you bothered by any limitations in performing everyday living activities?

F11.1 (F13.1.1): How dependent are you on medications?

F11.2 (F13.1.3): How much do you need any medication to function in your daily life?

F11.3 (F13.1.4): How much do you need any medical treatment to function in your daily life?

F11.4 (F13.2.2): To what extent does your quality of life depend on the use of medical substances or medical aids?

F12.1 (F16.1.1): Are you able to work?

F12.2 (F16.1.2): Do you feel able to carry out your duties?

F12.3 (F16.1.3): How would you rate your ability to work?

F12.4 (F16.2.1): How satisfied are you with your capacity for work?

A.2. Social relations questions

F13.1 (F17.1.3): How alone do you feel in your life?

F13.2 (F17.2.1): Do you feel happy about your relationship with your family members?

F13.3 (F17.2.3): How satisfied are you with your personal relationships?

F13.4 (F19.2.1): How satisfied are you with your ability to provide for or support others?

F14.1 (F18.1.2): Do you get the kind of support from others that you need?

F14.2 (F18.1.5): To what extent can you count on your friends when you need them?

F14.3 (F18.2.2): How satisfied are you with the support you get from your family?

F14.4 (F18.2.5): How satisfied are you with the support you get from your friends?

F15.1 (F3.1.1): How would you rate your sex life?

F15.2 (F3.1.2): How well are your sexual needs fulfilled?

F15.3 (F3.2.1): How satisfied are you with your sex life?

F15.4 (F3.2.3): Are you bothered by any difficulties in your sex life?

A.3. Environment questions

F16.1 (F20.1.2): How safe do you feel in your daily life?

F16.2 (F20.1.3): Do you feel you are living in a safe and secure environment?

F16.3 (F20.2.2): How much do you worry about your safety and security?

F16.4 (F20.2.3): How satisfied are you with your physical safety and security?

F17.1 (F21.1.1): How comfortable is the place where you live?

F17.2 (F21.1.2): To what degree does the quality of your home meet your needs?

F17.3 (F21.2.2): How satisfied are you with the conditions of your living place?

F17.4 (F21.2.4): How much do you like it where you live?

F18.1 (F23.1.1): Have you enough money to meet your needs?

F18.2 (F23.1.5): Do you have financial difficulties?

F18.3 (F23.2.3): How satisfied are you with your financial situation?

F18.4 (F23.2.4): How much do you worry about money?

F19.1 (F24.1.1): How easily are you able to get good medical care?

F19.2 (F24.1.5): How would you rate the quality of social services available to you?

F19.3 (F24.2.1): How satisfied are you with your access to health services?

F19.4 (F24.2.5): How satisfied are you with the social care services?

F20.1 (F25.1.1): How available to you is the information that you need in your day-to-day life?

F20.2 (F25.1.2): To what extent do you have opportunities for acquiring the information that you feel you need?

F20.3 (F25.2.1): How satisfied are you with your opportunities for acquiring new skills?

F20.4 (F25.2.2): How satisfied are you with your opportunities to learn new information?

F21.1 (F26.1.2): To what extent do you have the opportunity for leisure activities?

F21.2 (F26.1.3): How much are you able to relax and enjoy yourself?

F21.3 (F26.2.2): How much do you enjoy your free time?

F21.4 (F26.2.3): How satisfied are you with the way you spend your spare time?

F22.1 (F27.1.2): How healthy is your physical environment?

F22.2 (F27.2.4): How concerned are you with the noise in the area you live in?

F22.3 (F27.2.1): How satisfied are you with your physical environment (e.g., pollution, climate, noise, attractiveness)?

F22.4 (F27.2.3): How satisfied are you with the climate of the place where you live?

F23.1 (F28.1.2): To what extent do you have adequate means of transport?

F23.2 (F28.1.4): To what extent do you have problems with transport?

F23.3 (F28.2.2): How satisfied are you with your transport?

F23.4 (F28.2.3): How much do difficulties with transport restrict your life?

References

- Alcoholics Anonymous World Services. (1939/2001). *Alcoholics Anonymous: The story of how many thousands of men and women have recovered from alcoholism*, 4th ed. New York: Alcoholics Anonymous World Services Inc.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders*, 4th ed. Text Revision. Washington, DC: Author.
- American Psychiatric Association – Committee on Public and Community Psychiatry. (2005). *Use of the concept of recovery: Position statement*. Approved July 2005. <http://www.psych.org>.
- Anthony, W., Gagne, C., & White, W. (2007). Recovery: A common vision for the fields of mental health and addictions.
- Breslow. (2006). Health measurement in the third era of health. *American Journal of Public Health*, 96, 17–19.
- Borkman, T., Kaskutas, L., Room, J., & Ma, L. (1998). An historical and developmental analysis of social model programs. *Journal of Substance Abuse Treatment*, 27, 123–134.

- Centers for Disease Control and Prevention, & Lance Armstrong Foundation. (2004). A national action plan for cancer survivorship: Advancing public health strategies. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Available at: www.cdc.gov/cancer/survivorship/what_cdc_is_doing.
- Cheever, S. (2004). *My name is Bill: Bill Wilson—His life and the creation of Alcoholics Anonymous*. New York: Simon & Schuster.
- Danaei, G., VanderHoom, S., Lopez, A. D., Murray, C. D. L., & Ezzati, M. (2005). Causes of cancer in the world: Comparative risk assessment of nine behavioral risk factors. *Lancet*, *336*, 1785–1793.
- Deegan, P. E. (1988). Recovery: The lived experience of rehabilitation. *Psychosocial Rehabilitation Journal*, *11*, 11–19.
- De Leon, G. (2000). *The therapeutic community: Theory, model and methods*. New York: Springer Publishing.
- Dennis, M. L., Scott, C. K., Funk, R., & Foss, M. A. (2005). The duration and correlates of addiction and treatment careers. *Journal of Substance Abuse Treatment*, *28*(Suppl 1), S51–S62.
- Department of Health and Human Services (2003). *Achieving the promise: Transforming mental health care in America*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Flynn, P. M., Joe, G. W., Broome, K. M., & Simpson, D. D. (2003). Looking back on cocaine dependence: Reasons for recovery. *American Journal on Addictions*, *12*, 398–411.
- Galanter, M. (1997). Spiritual recovery movements and contemporary medical care. *Psychiatry*, *60*, 211–223.
- Grant, B. F., Hasin, D. S., Chou, P., Stinson, F. S., & Dawson, D. A. (2005). Nicotine dependence and psychiatric disorders in the United States. *Archives of General Psychiatry*, *61*, 1107–1115.
- Healthy People 2010 – Volume 1. U.S. Department of Health and Human Services Pub. 2000. <http://www.healthypeople.gov/>.
- Humphreys, K., Wing, S., McCarty, B., Chappel, J., Gallant, L., Haberle, B., et al. (2004). Self-help organizations for alcohol and drug problems: Toward evidence-based practice and policy. *Journal of Substance Abuse Treatment*, *26*, 151–158.
- Institute of Medicine. (2006). *Improving the quality of health care for mental and substance-use conditions*. Washington, DC: The National Academies Press.
- Kurtz, E. (1979). *Not God—A history of Alcoholics Anonymous*. Center City, MN: Hazelden.
- Laudet, A. (2007). What does recovery mean to you? Lessons from the recovery experience for research and practice. *Journal of Substance Abuse Treatment*, *33*, 243–256.
- Laudet, A., Morgen, K., & White, W. (2006). The role of social supports, spirituality, religiousness, life meaning and affiliation with 12-step fellowships in quality of life satisfaction among individuals in recovery from alcohol and drug use. *Alcoholism Treatment Quarterly*, *24*, 33–73.
- McLellan, A. T., & Weisner, C. (1996). Achieving the public health potential of substance abuse treatment: Implications for patient referral and outcome evaluation. In W. Bickel, & R. DeGrandpre (Eds.), *Drug policy and human nature* (pp. 296–324). Philadelphia: Wilkins and Wilkins.
- Moos, R. H., & Moos, B. S. (2006). Rates and predictors of relapse after natural and treated remission from alcohol use disorders. *Addiction*, *101*, 212–222.
- Murphy, B., Herrman, H., Hawthorne, G., Pinzone, T., & Evert, H. (2000). Australian WHOQOL instruments: User's manual and interpretation guide. Melbourne, Australia: Australian WHOQOL Field Study Centre.
- Murphy, S., & Irwin, J. (1992). "Living with the dirty secret": Problems of disclosure for methadone maintenance clients. *Journal of Psychoactive Drugs*, *24*, 257–264.
- Reeve, B. B. (2007). Special issues for building computerized-adaptive tests for measuring patient-reported outcomes: The NIH's investment in new technology. *Medical Care* (See also <http://www.nihpromis.org/>).
- Reis, L. A., Eisner, M. P., Kosary, C. L., et al. (Eds.). (2003). *SEER cancer statistics review, 1975–2000*. (pp. 233–256). Bethesda, MD: National Cancer Institute.
- Rosner, S. A., & Stamfer, M. J. (2006). The heart-breaking news about tobacco: It's all bad. *Lancet*, *368*, 621–622.
- Rowland, J. H. (2004). What's in a name: Who is a cancer survivor? *Journal of the National Cancer Institute*, *96*, 1414–1415.
- Rychtarik, R. G., Connors, G. J., Demen, K. H., & Stasiewicz, P. R. (2000). Alcoholics Anonymous and the use of medications to prevent relapse: An anonymous survey of member attitudes. *Journal of Studies on Alcohol*, *61*, 134–138.
- Scott, C. K., Foss, M. A., & Dennis, M. L. (2005). Pathways in the relapse-treatment-recovery cycle over 3 years. *Journal of Substance Abuse Treatment*, *28*, S63–S72.
- Simpson, D. D. (2004). A conceptual framework for drug treatment process and outcomes. *Journal of Substance Abuse Treatment*, *27*, 99–121.
- Skevington, S. M., Lotfy, M., & O'Connell, K. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. A report from the WHOQOL Group. *Quality of Life Research*, *13*, 299–310.
- Sobell, L., Ellingstad, G., & Sobell, M. (2000). Natural recovery from alcohol and drug problems: Methodological review of the research with suggestions for future directions. *Addiction*, *95*, 749–764.
- Tiebout, H. (1953, September). Surrender versus compliance in therapy. *Grapevine*, *10*, 3–8.
- Ware, N. C., Hopper, K., Tugenber, T., Dickey, B., & Fisher, D. (2007, April). Connectedness and citizenship: Redefining social integration. *Psychiatric Services*, *58*, 27–38.
- White, W. (2006). Let's go make some history: Chronicles of the new addiction recovery advocacy movement. Washington, DC: Johnson Institute and Faces and Voices of Recovery.
- White, W. (2007). Addiction recovery: Its definition and conceptual boundaries. *Journal of Substance Abuse Treatment*, *33*, 229–241.
- White, W., & Coon, B. (2003). Methadone and the anti-medication bias in addiction treatment. *Counselor*, *4*, 58–63.
- WHO-QOL Group. (1995). The World Health Organization Quality of Life assessment (WHOQOL): Position paper from the World Health Organization. *Social Science & Medicine*, *41*, 1403–1409.
- WHO-QOL Group. (1998a). The World Health Organization Quality of Life assessment (WHOQOL): Development and general psychometric properties. *Social Science & Medicine*, *46*, 1569–1585.
- WHO-QOL Group. (1998b). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological Medicine*, *28*, 551–558.
- World Health Organization (1985). Basic documents, 35th ed. Geneva, Switzerland: WHO.