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THINK PIECE

A biaxial formulation of the recovery construct

John Francis Kelly and Bettina Hoeppner

Department of Psychiatry, MGH Center for Addiction Medicine and Harvard Medical School, Boston, MA, USA

Abstract

The term ''recovery'' in the substance use disorder (SUD) field has been used generally and non-technically to describe global improvements in health and functioning typically following successful abstinence. More recently, however, in an attempt to reduce the stigma and negative public and clinical perceptions regarding remission potential for individuals suffering from SUD, ''recovery'' has been used more strategically to instil hope and to serve as an organizing paradigm that has inspired a growing recovery movement. In addition, with ''recovery'' gaining momentum internationally within governments' national health care agencies, there is increasing pressure to operationalise this construct as without it, it is difficult to develop, commission, and deliver the tailored packages of recovery support services needed to help individuals suffering from SUD. Initial attempts to define recovery and delineate its constituent parts have agreed on major elements, but differ on important subtleties; generally lacking has been a conceptual grounding of these definitions. The goal of this article is to promote further thought and debate by offering a conceptual basis for, and description of, the recovery construct that we hope enhances clarity and measurability. To accomplish this, we review existing definitions of recovery and offer a simplified bi-axial formulation and definition, reciprocal in nature, and grounded in stress and coping theory, which mirrors conceptually original formulations of the addiction syndrome.

Keywords

Addiction, policy, recovery, remission, terminology, substance use disorder

History

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Origin of the ''recovery'' construct

The term ''recovery'' in the substance use disorder (SUD) field has been used non-technically to describe, in a general way, improved health and functioning following abstinence (White, 1998). More recently, in an attempt to help offset the stigma and common nihilistic public, and often clinical, perceptions regarding remission potential for individuals suffering from SUD, ''recovery'' has been used more strategically in place of ''disease/disorder'' (e.g. ''addiction recovery management'' instead of ''disease management'') to instil hope and to serve as an organizing paradigm that has inspired a growing ''recovery movement'' (White, 2007). As such, this construct has gained considerable momentum in the USA, UK, and other countries (Substance Abuse and Mental Health Services Administration, 2011; UK Drug Policy Commission, 2008; White, 2007)

With ''recovery'' gaining momentum as an organizing paradigm in many countries (El-Guebaly, 2012; Substance Abuse and Mental Health Services Administration, 2011; UK Drug Policy Commission, 2008; White, 2007) a need to define this term and construct has become increasingly necessary. Without greater clarity, it is challenging to develop, commission, and deliver the tailored packages of recovery support services needed to support individuals beginning recovery. Additionally, important payers and other stakeholders in the field are beginning to scrutinize the construct and make it operational for purposes of measurement and third party reimbursement for recovery support services (Knopf, 2011; El-Guebaly, 2012). To this end, considerable expert thought has been devoted to defining recovery (The Betty Ford Institute Consensus Panel, 2007), resulting in positive and welcome initial attempts to delineate the construct and its constituent parts. The resulting definitions and operationalisations have been many and varied, agreeing on major dimensions, but differing on important subtleties. Generally lacking has been a conceptual grounding of these definitions; a recent comprehensive review on the meanings of addiction recovery by El-Guebaly (2012) concluded that ''a consensual theoretical framework of addiction recovery remains to be elaborated. . .''.

To this end, the goal of this article is to stimulate further thought and debate by offering a theoretical basis for, and description of, the recovery construct that we hope enhances clarity and measurability, and stimulates further discussion. To accomplish this goal, we review current definitions of the recovery construct and offer a simplified bi-axial formulation and definition grounded in stress and coping theory (Folkman, 1984), which mirrors, conceptually, original formulations of the addiction syndrome (Edwards, 1986; Edwards & Gross, 1976).

Correspondence: John Francis Kelly, Department of Psychiatry, MGH Center for Addiction Medicine, 60 Staniford Street, Boston, MA 02114, USA. E-mail: jkelly11@mgh.harvard.edu

''Recovery'' as moving beyond abstinence, sobriety and remission

One essential aspect of the recovery construct is that it is meant to encompass broader biopsychosocial improvements and attainments beyond substance ''non-use'', that typically have been captured by terms such as ''abstinence'', ''sobriety'', and ''remission''. The recovery construct recognizes and incorporates these broader contextual factors that are correlated with successful abstinence or remission. Many in the addiction and recovery field question whether anyone has the authority to define ''recovery'', as it signifies such a profound and personal experience, yet, several working definitions from various organizations have been proposed. Table 1 outlines some of these more prominent definitions emanating from the Center for Substance Abuse Treatment (CSAT), the American Society of Addiction Medicine (ASAM), the Betty Ford Institute (BFI), the UK Drug Policy Commission (UKDPC), the Scottish Government, and the US Substance Abuse and Mental Health Services Administration (SAMHSA). Recovery is variously described as a ''lifestyle'' (''What is recovery? A working definition from the Betty Ford Institute'', 2007), a ''process'' (Center for Substance Abuse Treatment, 2005; Substance Abuse and Mental Health Services Administration, 2011; UK Drug Policy Commission, 2008), or as a ''state'' (American Society of Addiction Medicine, 2005). Most define it as requiring abstinence/sobriety, while the others (Substance Abuse and Mental Health Services Administration, 2011; UK Drug Policy Commission, 2008) describe it as ''sustained control'' and characterize it less specifically as having attendant improvements in ''health and wellness''. Most mention aspects of wellness, health, quality of life, and three take an extra step in defining recovery as including elements of ''citizenship'' or social participation.

Highly influential individuals in the addiction recovery arena, who have provided much of the influential narrative and explication of the recovery construct (e.g. William L. White), have also offered their own definitions that capture many of these same elements. White (2007) defines recovery with a focus on the individual, consequently defining recovery as first and foremost an individual ''experience'' (White, 2007), but otherwise contains many of these same dimensions. Additional recovery-oriented organizations have chosen not to provide an objective definition; instead, leaving it to individual sufferers to decide for themselves (e.g. ''You're in recovery when you say you are''; Valentine, 2011).

The publisher of the most widely used diagnostic coding system in the USA, the American Psychiatric Association (APA), also briefly mentions ''recovery'', but favours the medical term, ''remission'', to describe the process of improvement in health and functioning. The fourth edition of the Diagnostic and Statistical Manual (DSM) of the APA (American Psychiatric Association, 1994) details operationally defined specifiers of ''remission'' along two dimensions of time and remission completeness (i.e. early/sustained; partial/full remission). ''Recovery'' itself it is rarely mentioned, but when it is, it is specified purely in terms of substance remission (American Psychiatric Association, 1994): ''The differentiation of Sustained Full Remission from recovery (no substance use disorder) requires consideration of the length of time since the last period of disturbance, the total duration of the disturbance, and the need for continued evaluation.''

SAMHSA's (2011) working definition of recovery has attempted to incorporate recovery from both mental illness *and* substance use disorder. Elaborating further, SAMHSA (2011) states that recovery is supported by four factors: *Health*: overcoming or managing one's disease(s) as well as living in a physically and emotionally healthy way; *Home*: having a stable and safe place to live; *Purpose*: meaningful daily activities, such as a job, school, volunteerism, family caretaking, or creative endeavors, and the independence, income and resources to participate in society; and *Community*: relationships and social networks that provide support, friendship, love, and hope. In many ways, these supportive factors relate to Maslow's process of self-actualization (Maslow, 1968). Maslow proposes a multi stage process beginning with physiological needs (e.g. oxygen, water, food), safety needs (protection from physical harm),

Table 1. Prominent addiction recovery definitions.

Source	Year	Definition
Center for Substance Abuse Treatment (CSAT)	2005	Recovery from alcohol and drug problems is a process of change through which an individual achieves abstinence and improved health, wellness and quality of life
American Society of Addiction Medicine	2005	A patient is in a ''state of recovery'' when he or she has reached a state of physical and psychological health such that his/her abstinence from dependency-producing drugs is complete and comfortable.
Betty Ford Institute Consensus Panel	2006	A voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship
UK Drug Policy Commission	2008	The process of recovery from problematic substance use is characterised by voluntarily-sustained control over substance use which maximises health and wellbeing and participation in the rights, roles and responsibilities of society
Scottish Government	2008	A process through which an individual is enabled to move on from their problem drug use, towards a drug-free life as an active and contributing member of society
SAMHSA	2011	Recovery from mental disorders and substance use disorders is a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential.

belongingness needs (e.g. love, affection, affiliation), and esteem needs (self-confidence, self-respect from authentic achievement). According to Maslow, once these needs are met, one can ''self-actualize'' – that is, feel fully alive, good, and experience meaning in life. Analogously, from an SUD recovery standpoint, individuals may need physiological stabilization (e.g. medically managed detoxification), safe housing (e.g. Oxford House, sober living), a sense of belonging (e.g. recovery community support and connection), and self-esteem (e.g. elevated by one's ability to sustain remission and improve one's quality of life). These elements also can all be included under the heading of ''recovery capital'' as espoused by (Granfield & Cloud, 1999). Recovery capital (RC) is defined as the breadth and depth of internal and external resources that can be drawn upon to initiate and sustain recovery (Granfield & Cloud, 1999, 2004).

Areas in need of clarification

One important question related to each one of these definitions on close examination is whether they are intended merely as descriptive in a general way - of being *generally true* of most individuals ''in recovery'', or whether their component parts are designed to serve as specific facets from which criteria are to be derived in order to categorize someone as being ''in recovery''. This distinction is important, when scientific endpoints or third party payments are to be defined. Yet current definitions of ''recovery'' provide little guidance on this point.

One such area in need of clarification is the role of personal health in the recovery process. Almost all definitions include some mention of personal health. Definitions differ in their specificity of how health is to be understood within the context of the recovery process. The ASAM, for example, suggests that recovery merely entails reaching a state of health such that ''abstinence ... is complete and comfortable''. Other definitions, however, are vaguer and potentially more encompassing, such as definitions by SAMHSA and CSAT, in which recovery is described as ''a process ... through which individuals improve their health'' or ''achieve ... improved health''. The question arises as to what kind of health improvements should be considered 'mandatory' for an individual to be considered to be in recovery. For example, if an individual fails to follow dietary guidelines for exercise and diet, would those actions entail a failure to maximize personal health? If a person continues to smoke cigarettes, would that individual be viewed as not in recovery? If so, the standards applied to persons in recovery would appear to be more stringent than the standards lived up to by the majority of the population.

A similar concern arises in the consideration of the idea of citizenship. Fewer definitions mention citizenship than health, but several still do. For example, both the Scottish government and the UK Drug Policy Commission define recovery partially as movement towards a ''life as an active and contributing member of society'' or a process through which one maximizes ''participation in the rights, roles and responsibilities of society''. These definitions may merely reflect gainful employment, paying of taxes, or the fulfillment of other basic societal roles. They may also, however, suggest a more active role. The Betty Ford institute, for example, further defines its mention of ''citizenship'' as ''working towards the betterment of one's community'' (The Betty Ford Institute Consensus Panel, 2007), suggesting a far more active societal role than the average citizen evidences. While such activities are certainly in line with working 12-step mutual-help organization principles, for example, and thus are likely to support recovery, should they be necessary components of the definition of ''recovery''? Should recovery-oriented programs only be reimbursed if their clientele actively contribute to the betterment of their community? Should efficacy studies of such programs use citizenship as a main endpoint for analysis? Not only are such endpoints difficult to concretely define, they also impose a standard on persons in recovery that is unlikely to be reached by the general population, most of whom do not have the added challenges of cognitive and affective impairment that many attempting addiction recovery do.

Bi-axial formulation of the recovery construct

Most proposed definitions of ''recovery'' have been explicitly stated as provisional or working definitions, and have garnered attention and scrutiny at various levels internationally (White, 2007, 2010; El-Guebaly, 2012). We believe they capture many of the critical challenges facing individuals engaged in the recovery process (Laudet, 2007; Laudet & White, 2008). Some have argued that some recovery definitions evoke controversy by perhaps being overly broad, setting too high a bar for some to reach (e.g. working towards the betterment of one's community; The Betty Ford Institute Consensus Panel, 2007). This complication might be avoided by more clearly distinguishing between remission from the SUD on the one hand, and the accruement of recovery capital, on the other. Mirroring the initial bi-axial formulation of the dependence/addiction syndrome (Edwards & Gross, 1976; Edwards, 1986), below we introduce and discuss a bi-axial formulation of the recovery construct that we hope will help add clarity by separating remission from the disorder itself from the positive consequences and accrual of recovery capital that ensues from this remission, and in turn, may support it.

In attempting initially to delineate the dependence/addiction syndrome, Edwards and Gross (1976) and Edwards (1986) proposed a bi-axial formulation of the construct with the syndrome, per se, on one axis, and the consequences of the syndrome – the related problems, on the other. We depict this association in Figure 1(A), below. As the addiction syndrome shows increasing severity and coherence, associated problems also increase. These can include problems to do with physical and mental health, housing, social relations, work/educational attainment, and loss of meaning and purpose. In a similar, bi-axial way, although not described explicitly as such, White and Cloud (2008) describe how addiction severity as well as the extent of available recovery resources (''recovery capital'') *both* should be considered in treatment planning. Specifically, they describe how different types and levels of intervention and continuing care may be needed depending not just on the degree and complexity of the addiction problem, but also on the amount of recovery

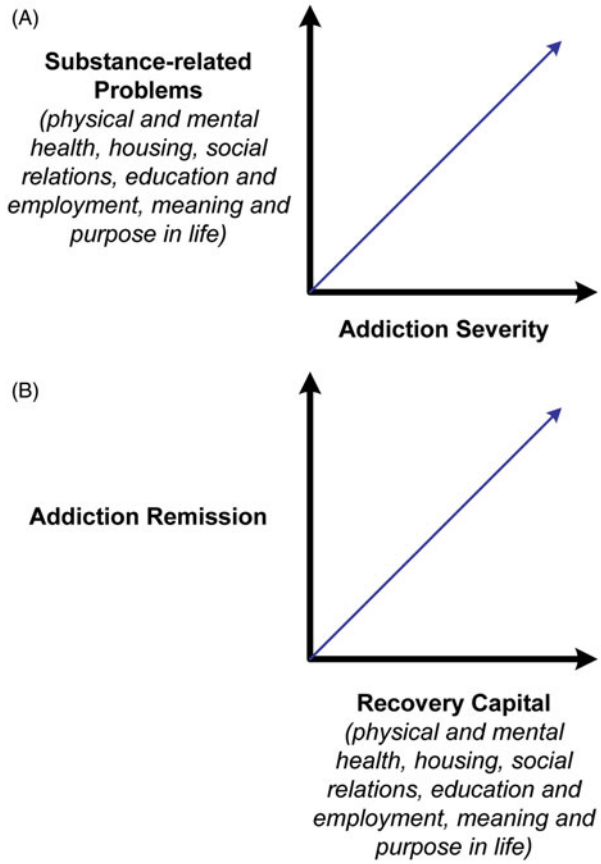

Figure 1. Biaxial formulations of the (A) Addiction Construct; and (B) Recovery Construct.

resources available to that individual (White & Cloud, 2008, pgs. 5–6).

As we grapple with defining the construct of ''recovery'', and operationally defining it, we propose a similar bi-axial formulation which mirrors that of Edwards and Gross' (1976) addiction syndrome formulation and also echoes aspects of White and Clouds' (2008) conceptualization for use n treatment planning. Differing from both of these former conceptualizations, however, the model specified here is grounded conceptually in stress and coping theory and is intended to describe the reciprocal aspects of the two axes involved in the recovery process following initial abstinence and stabilization. Specifically, the key substance-related component, ''remission'', is placed on one axis (defined broadly along a timeline of early remission, stable remission, sustained remission etc.); on the other axis, similar to Edwards and Gross' (1976) formulation of the addiction syndrome, is placed the positive related consequences ensuing from, as well as supporting, the achievement of these levels of remission. Figure 1(B) proposes that as addiction remission become more stable and prolonged, there are improvements in physical and mental health, housing and social relations, educational and work attainment, and an increased sense of meaning and purpose. Crucially, however, the relationship in our model is proposed to be reciprocal with greater recovery capital increasing the chances of ongoing remission – a relationship that is mediated by absolute reductions in stress and/or an increased ability to cope with stress, as explained in more detail below.

Contextualizing recovery: stress and coping

Clearly, the prognosis for addiction recovery is not just a function of the severity of the illness, but also a function of resources that one can bring to bear in aid of the recovery attempt (White & Cloud, 2008). These two joint contributors can be understood more generally within the Transactional Model of Stress and Coping (Folkman, 1984). According to this model, individuals engage in two types of appraisals when encountering a potentially stressful situation. First, in the primary appraisal, the significance of a situation is evaluated as stressful, positive, controllable, challenging or irrelevant. If it is evaluated as stressful, a secondary appraisal takes place, in which the controllability of the stressor and the availability of coping resources are evaluated. At the biological hormonal system level the hypothalamic-pituitary-adrenal (HPA) axis and glucocorticoids, such as cortisol, are higher among individuals in early recovery and can interfere with new learning increasing the risk of a stress-induced pathway to relapse (Kelly & Yeterian, 2013; Stephens & Wand, 2012). Applied to the recovery process, this model suggests that because individuals encounter significant biopsychosocial stress as they adapt and adjust to the demands of recovery, HPA-axis sensitivity and dysfunction is likely to result in high stress hormone (cortisol) release. Greater availability and accrual of recovery capital will influence resilience and coping, and help reduce and buffer stress, including serum cortisol levels, supporting continued remission. Conceptually, then, the appraisal of, and coping with, the stressors encountered in recovery will co-vary along with the degree of available recovery capital. Figure 1 depicts these two bi-axial formulations of addiction and recovery.

Stress and coping theory would predict that individuals with less recovery capital/fewer recovery resources are more likely to appraise situations as more stressful and be less likely to cope with them effectively, consequently experiencing greater distress. Therefore, we have placed ''recovery capital'' on the x-axis in Figure 1(B), with ''addiction remission'' on the y-axis, implying that the causal direction would be one in which the accruement of recovery capital would result in greater levels of remission. Clearly, however, more research is needed to disentangle the causal relationship of these two constructs. Their covariation is likely high, yet it remains to be seen if their relationship is causal, and if so, if it is uni- or bi-directional. The actual empirical *nature* of this relationship is also unclear. Depicted in Figure 1(B), for example, is a 1:1 linear relationship: for every one unit in increase in recovery capital there is a similar magnitude increase in the likelihood of remission. However, this relationship may be curvilinear, containing certain important thresholds. It is conceivable, for instance, that a certain minimum of recovery capital may be more critical in order to establish remission and gain a foothold in recovery (e.g. detoxification, safe living environment), but beyond that, additional recovery capital, while increasing the probability of remission, may do so at a more gradual rate of return. Whatever the empirical associations turn out to be, they are likely to be complex as there will be a large array of mechanisms at work and different individuals may use different elements of their recovery capital to sustain remission and build recovery over time.

A reciprocating bi-axial definition grounded in stress and coping theory

Stemming from this bi-axial formulation, we offer the following that we hope provides a definition with a conceptual basis, intended to aid further clarity and stimulate additional analysis and debate: ''Recovery is a dynamic process characterized by increasingly stable remission resulting in and supported by increased recovery capital and enhanced quality of life''.

We believe this definition may be useful since it underscores several features. First, it highlights the dynamic nature of recovery. The word ''process'' captures this aspect too, but adding the word ''dynamic'' emphasizes the variable nature of the terrain encountered on the varied paths to recovery. Second, it describes the substance use dimension as being in ''remission'' which is not synonymous with abstinence or sobriety (i.e. ''remission'' suggests that one could be using substances and exhibit improved functioning at a sub-threshold level). As such, it caters to those that may be using in a non-symptomatic manner which may foster greater sub-cultural or international and cross-cultural utility (e.g. in the UK). As noted, most importantly, it separates increasingly stable remission from the disorder itself, from the important resulting *accrual* of recovery capital and evokes a *reciprocal* aspect whereby increasing remission enhances recovery capital and vice versa.

Conclusion

Historically, the concept of ''recovery'' from severe alcohol and other drug use disorders has been used in a general sense and non-technically to describe sustained improvement from the disorder, but has emerged recently as an organizing construct that may help galvanize stakeholders, reduce stigma surrounding addiction, and ultimately, increase the public health of nations suffering under the burden of prodigious and intransigent substance-related harms. It is often said that ''the devil is in the details'' (and he is probably not in recovery). Consequently, as the field scrutinizes the construct and makes it operational for purposes of measurement and third party reimbursement for recovery support services (El-Guebaly, 2012; Knopf, 2011), several prominent definitions have been offered. Adding to this debate, this paper offers a new conceptualization and definition, bi-axial and reciprocal in nature, and grounded in stress and coping theory, intended to stimulate further discussion and enhance focus, definition, and clarity.

Declaration of interest

The authors report no conflicts of interest.

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