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RECOVERY-INFORMED THEORY: SITUATING THE SUBJECTIVE IN THE SCIENCE OF SUBSTANCE USE DISORDER RECOVERY

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ABSTRACT

As recovery from substance use disorder becomes more than a mere quantifiable outcome, there exists a need to discuss and propose the underlying theoretical constructs that ultimately describe and identify the science of recovery. In this abstract undertaking, we propose an initial formulation of a grand theory of recovery science, built upon the seminal theories of recovery capital, recovery-oriented systems of care, and socioecological theory. This grand theory - labeled recovery-informed theory (RIT) - states that successful long-term recovery is self-evident and is a fundamentally emancipatory set of processes. This paper will discuss, analyze, and explore this theory as it is situated within the larger substance use, misuse, and disorder contexts. The uses, implications, and benefits of RIT as an organizing point of inquiry for recovery science are also discussed. By promoting the role of subjective recovery experience in the formulation of the study of recovery, it may be possible to summon new ideas, metrics, and strategies that can directly address substance use disorders in society. Adopting a recovery-informed understanding as follows from this grand theory may allow individual recovery and wellness trajectories to be explored, adapted, and modified to exemplify person-centered and individualized recovery strategies.

KEYWORDS

addiction; recovery; theory; recovery process; substance use disorder; recovery-informed theory

Introduction

Historically, recovery science has been inseparable from the science of addiction. As there is often little room for personal experiences in the study of addiction pathology, it can be surmised that there has historically been a general "acting-upon" rather than "acting with" those with substance use disorders (SUD) or in recovery (Heron & Reason, 2006). This has in effect colonized the field and objectified the subject of study - individuals in this case (Fisher et al., 2008). To reconcile this, value must be placed on the subjective experiences of individuals with severe SUDs (i.e., addiction) and in recovery. This is particularly salient if we consider those with a SUD, or in recovery, to be members of a marginalized population.

Recovery has classically been framed by addiction science as the desirable outcome that is achieved once symptomatological indices have been reduced below an arguably arbitrary, clinical threshold (Ashford et al., 2018). The absence of pathology reveals little information about the initialization and sustainment of recovery. Symptomatological study of addiction produces a

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limited insight into recovery phenomena. Therefore, calls for a more robust inquiry into recovery phenomena is warranted (Krentzman, 2013). In essence, we believe recovery needs its own fundamental science — distinct from but related to addiction science. To achieve this, we first propose a general separation between the study of pathology (i.e., SUD causes and effects) and the study of wellness (i.e., recovery). Secondly, we discuss and propose a grand theory of recovery science, recovery-informed theory (RIT), as the means to organize the broad range of recovery phenomena that occur in the lives of individuals with SUDs.

The justification for an independent field dedicated to recovery science is contingent on several premises. As discussed, the study of how to initiate and sustain wellness trajectories differs from the study of the causes and conditions of destructive illness, such as addiction. The absence of SUD symptoms, including the use/or non-use of a substance, reveals little about individual growth from a scientific standpoint. As phenomena, recovery is often evidenced by personal and relational growth that affects all life domains (Ashford et al., 2018), which warrants focus on observing such growth in myriad form. As recovery positively impacts multiple areas of life, it can be considered a true interdisciplinary process that spans biological, psychological, sociological, and cultural sciences. As a process of growth, recovery requires a science that is a longitudinal inquiry of post-SUD human development. Finally, according to the subjective accounts of those who have recovered, recovery itself is more than an outcome variable (Laudet, 2007; Flaherty, Kurtz, White, & Larson, 2014; Neale et al., 2015), spanning several ecologies, identities, relationships, social status, and global health variables.

Diversifying and separating the study of addiction from the study of recovery is an important ontological shift at a timely moment in our history. As the death toll mounts from the opioid-driven overdose crisis, public health officials have worked to develop solutions across communities, social classes, and geographic regions (Christie et al., 2017). Much of this public policy response has been reactive and aimed at public health outcomes, such as mortality reduction. Often lost in this response is the pursuit of sustainable, long-term solutions that allow for an individual with a SUD to reconstitute their lives in comprehensive and meaningful ways. Policy focus has been primarily in the realm of prescription drug control (Kirschner, Ginsburg, & Sulamsy, 2014; Kolodny et al., 2015), but also in the prevention of death and crime related to opioid use disorders (OUD; Mathis, Hagermeir, Hagaman, Dreyzehner, & Pack, 2018; Volkow, 2014). Beyond the immediate concerns with opioids, the larger SUD picture in the United States remains even more complex and broader in scope than opioids alone (Substance Abuse and Mental Health Service Administration [SAMHSA], 2017).

However unfortunate the current crisis has been, substantial scientific efforts have emerged from renewed interest in the field. This is particularly true in the areas of addiction medicine and public health research. This is evidenced by the increase in addiction medicine research (Collins, Koroshetz, & Volkow, 2018), journalism that references research on addiction medicine and public health, federal grant money for expansion of medical services to treat addiction, and major federal policy changes such as the Comprehensive Addiction and Recovery Act of 2016 and 21st Century CURES Act. The Surgeon General's Report on addiction, released in 2016, was the first ever in history. Despite renewed scientific interest related to the current crisis, long-term recovery is less understood when compared to the science of medical and public health interventions. In order to better understand recovery from SUD as a whole, research endeavors should establish and organize recovery science as an independent field of inquiry to create a scientific specialization focused upon the causes, interventions, and practices that initiate and foster lifelong wellness.

Researchers must first begin with the systematic understanding of successful recovery phenomena in order to increase the efficacy and responsiveness within systems of care, while utilizing effective interventions and establishing multidimensional bases of evidence. Beginning with a phenomenological lens, and utilizing basic collaborative inquiry, it may be possible to understand measure, validate, and replicate the major commonalities between successful recovery trajectories as they occur in-situ. To do this, critical steps are to bracket the existing suppositions and ideologies that shape recovery and form new templates of knowledge schema (Hupcey & Penrod, 2003). Qualitative data collected about personal recovery experiences can illustrate how recovery manifested and what this manifestation means to the person in recovery (White & Kurtz, 2006). This approach can assist in mapping out major benchmarks, turning points, and the overall topographical landmarks of recovery trajectories.

Groundwork for recovery science is founded upon the pioneering work of recovery-oriented systems of care (ROSC) (White, 2008) the development of recovery capital frameworks and theory (Cloud & Granfield, 2008; Laudet & White, 2008), which were adapted from theories of social capital (Bourdieu, 1986; Granfield & Cloud, 2001); and identity models of recovery, including personal identities (Biernacki, 1986; McIntosh & McKeganey, 2000) and social identities (Frings & Albery, 2014; Best et al., 2016). From these foundations, three key suppositions are set in place and become the basis for the RIT grand theory formulation. The first, that the social domain of recovery maintains a primacy in the capacity to heal individuals from disorder, provided such a sphere is supportive, bidirectional, and can be marshalled to overcome disorders and sustain wellness (White, 2008). The second is that formal systems of support can and should be oriented so that negative social determinants - such as housing,

employment, education, socio-economic status - can be overcome through care that both recognizes and responds to the needs of the engaging individuals (Cloud & Granfield, 2008). The third is that individuals in recovery experience radical shifts in identity both as a consequence and necessity of the recovery process, and that such shifts are experienced internally (Buernacki, 1986; McIntosh & McKeganey, 2000) as well as externally in social relationships (Frings & Albery, 2014; Best et al., 2016). With these theories applied and analyzed concurrently, a fourth supposition emerges, that systems of care must also be diversified, ranging from acute clinical intervention and stabilization to long-term ecological and social support, and that successful implementation and utilization of such a system would be evidenced by shifts in individual personal and social identities.

RIT, as a grand theory (Skinner, 1985), is built upon deconstructing and considering each of these seminal theories in the ways in which they explain the recovery phenomena. Though each holds merit individually and collectively, they lack the ability to explain how recovery phenomena - as a fundamental human process for those with SUDs and more broadly those seeking to achieve whole-person wellness - and interrelated ecological structures that support the phenomena, manifest and evolve. As such, the need for a grand theory, such as RIT, with the ability to explain such manifestations and evolutions, is needed.

RIT presents a fundamentally new perspective in the study of recovery by targeting science upon the specific populations where emancipation from pathological states has occurred. This positions the research specifically upon the subject of human emancipation as the starting point of new inquiry. When applied to SUD and compared to the science of addiction pathology, addiction medicine, and public health, a recovery-informed approach opens up a new avenue for the scientific understanding as to how people with substance issues may be set free from destructive cycles of behavior and the ensuing problems thereof. RIT brings together the current foundations of recovery science such as recovery capital and recovery-oriented systems of care, social identity, and ecological theories, authenticating these foundations against the lived recovery experience, thus providing the grand theory for recovery science. This article is an analysis of the key justifications, ideas, and implications of RIT. This article will also explore how RIT may help govern the investigation into the ways and means in which individuals reconstitute themselves, and their lives, post-SUD.

Recovery-informed Theory

All fields of social science have underlying theories that govern the basic premises and understandings of the field as a whole. Many of these mid-range and micro theories were built upon grand theories, or those theories concerned with the broad functioning of society and how specific social structures and processes within that society work and evolve (Davidoff, Dixon-Woods, Leviton, & Michie, 2015). As a new field of study, we propose RIT as the grand theory to guide future development and evolution of recovery science. RIT states: "***successful long-term recovery is self-evident and that such recovery is a fundamentally emancipatory set of processes***". RIT necessitates the combination of synthetic knowledge with subjective experience. While SUD and recovery from SUD are studied across a range of sciences, the lack of a unified field specific to recovery processes has resulted in a dearth of empirical knowledge that is cohesive, actionable, and generative. A unified field specific to the science of recovery, with RIT as the central grand theory, allows for the study of recovery to begin where it concretely exists, and can be guided by the experiences of those who have successfully resolved their substance issues. All the while upholding the values of emancipatory change through achievement of increasing degrees of holistic wellness across multiple life spheres.

RIT creates a contemporary knowledge from each field that touches upon SUDs in conjunction with, and validated by, the lived experience of recovery itself. Whether this is medical science, psychology, neuroscience, cultural anthropology, or sociology, each field has a unilateral sense of the SUD problem specific to that discipline. Each field is therefore limited in scope of inquiry in the absence of a unified structure.

To provide an example, the opioid crisis has increased the call for "evidence-based" treatment of SUD. This has been problematic in that the authority to socially construct and shape what constitutes "evidence" is currently in contention, even among professionals working in treatment of SUDs (Ashford & Brown, 2017). The authority to qualify and validate "evidence" is inherently shaped by the power within academic, bio-political, and economic interests (Kelly & McGoey, 2018). In order to unify various fields, there must be an incorporation of all the varied interests and knowledge bodies while simultaneously remaining critical toward structures of power and authority. At the same time, the humanity of the individual with a SUD, or seeking recovery, must be held at an authoritative premium aligned with self-directed independence.

From a public health lens, reducing death, crime, and disease transmission are all worthy outcome goals. There is science, particularly around pharmacotherapies for SUD that evidences positive outcomes in these areas of public health (SAMHSA, 2018). The US Surgeon General's report, Facing Addiction in America, outlines the benefits of these pharmacotherapies, stating, "Studies have repeatedly demonstrated the efficacy of MAT at reducing illicit drug use and overdose deaths, improving retention in treatment, and reducing HIV transmission" (2016, pg. 4-21). These are certainly critical first steps, mortality prevention is a necessity for future growth and engagement after all, but these are also minimal criteria for full wellness initiation. Many other elements such as personal relationships, sense of community, identity, and sense of self are often integral to recovery (Mezzina et al., 2006; Bathish et al., 2017; Best et al., 2017). "Evidence", therefore, would benefit from additional complexity and nuance, breaching a scope past death reduction, disease prevention, and criminal justice factors.

There is a disparity between empirical evidence of death and disease reduction in a population and the additional factors involved in holistic life reconstruction in recovery. Certainly, they are both important and interrelated, but public health, addiction medicine, and recovery growth possess different expectancies, measures, and discourse. Infrastructure for emancipatory recovery may not specifically relate to SUD at all. For example, we see that socio-ecological variables that are supportive of recovery (such as post-treatment housing, employment, and education) are some of the most important factors in helping people to sustain their recovery (Manuel et al., 2017; Kopak, Proctor, & Hoffman, 2017; Brown, & Bohler, 2018). These elements are also referenced as meaningful barriers to engagement and retention in abstinence-based treatment (such as twelve-step facilitation) and pharmacotherapy (Deering et al., 2011; Rawson, Cousins, McCann, Pearce, & Van Donsel, 2018). All of which bring RIT to center stage. In order to best understand recovery, empirical evidence of how recovery occurs must be drawn from recovery itself, rather than borrowed from the addiction science, medical, or public health fields.

RIT offers the possibility for such variables to be factored into the study of wellness trajectories. Furthermore, people who use drugs face enormous stigma, discrimination, and barriers to care worldwide (Room, Rehm, Trotter, Paglia, & Ustun, 2001; Ahern, Stuber, & Galea, 2007). Even when people seek formal treatment or recovery supports, access is limited by numerous factors such as the perceived need for treatment, attitudinal barriers, and systemic barriers, many of which are related to internalized and external stigma (SAMHSA, 2017; Andrade et al., 2014). Once recovery is initiated, multiple life domains often need repair. This can include domains such as finances, criminal justice status, family and peer relations, education, and global health (Neale et al., 2014; Best et al., 2015). Other forms of oppression based on ethnicity, health status, gender, and socioeconomics (Netherland, & Hanson, 2017) complicate all of this. For example, a felonious drug charge can bar people in recovery from securing housing, employment, and in some cases, they may even be barred from voting (Sung & Richter, 2006). This creates a cycle of disempowerment. Stripping voting rights prevent the formerly incarcerated from engaging in individual political action to address the very obstacles that disempower them. This ensures ongoing oppression and subjugation through political disenfranchisement. This "death spiral" of disempowerment has not been adequately addressed in the discussion of comprehensive recovery, though the exploration of the intersection of desistance and recovery has begun in recent years (Best, Irving, & Albertson, 2017). Experiences such as this should be incorporated in the study of recovery trajectories as such obstacles and forms of oppression are central to the recovery experience for many. In fact, addressing such obstacles and oppression are emancipatory processes even apart from SUD and recovery.

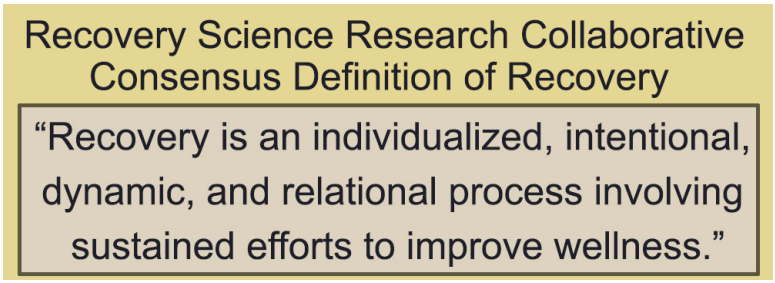
With a recovery-informed approach, nuances such as the one above are factored into empirical inquiry and become an operant part of the study of recovery pathways along with the ecological and social contexts that help or hinder such pathways. Applying RIT helps to create a unifying point for the study to incorporate vast amounts of variables from all sciences, thus, unifying the field. This creates the space and a platform for continuity of care across various systems and allows for multiple recovery pathways to be housed under an overarching grand theory and guided by human-centered interests – interests held by both of the individual and a society. Given the current crisis, a unified interdisciplinary field of recovery science guided by the subjective recovery experience and fused together at the intersectional areas of multiple scientific fields, would be a step forward that offers salient opportunities for new discovery and application of existing interventions from prevention, harm reduction, treatment and medical stabilization, and community-based recovery supports.

Recovery science is inherently strengths-based, aimed at promoting wellness and a predilection of subjective experience, and defines recovery as "an individualized, intentional, dynamic, and relational process involving sustained efforts to improve wellness" (Ashford et al., 2018) (See Figure 1). Notable in the definition is the constructing of recovery as a process, rather than an outcome (White, 2007; 2009). Absent in the definition is the use/non-use of a substance as the main axial demarcation of scientific success or failure. Abstinence from substances may not be the goal for some who seek recovery, and while abstinence is important and perhaps required for some with a SUD (White & Kurtz, 2006), scientifically, it reveals little about how a person

is progressing across multiple life areas by itself. The study of the ways and means in which people progress through the recovery process needs to be relatively open-ended in order to cast a wide net across intrapersonal, interpersonal, and ecological dimensions.

Whether someone experiences a recurrence of use or not (i.e. becomes symptomatic), may not be as important as the ways in which they are growing. Recurrence of use is common (Brandon, Vidrine, & Litvin, 2007), and it can often take a minimum of 5-years from the point of entry until one becomes stable in their recovery (Kelly, Greene, & Bergman, 2018). Abstinence, recurrence of use, and even moderation may be outcomes of the recovery process, or rather, side effects of recovery processes and progress. However, it would be unnecessarily limiting scientifically to pin the concepts of recovery success or failure on symptomatological indices such as use/non-use. Additionally, as recovery may constitute a range of trajectories and experiences (White, & Kurtz, 2006), a definition that is broad enough to incorporate all typologies of recovery (Witbrodt, Kaskutas, & Grella, 2015; Bischof, Rumpf, Meyer, Hapke, & John, 2007) offers a stable and equitable starting place for the scientific exploration of trajectories, topography, and multidimensional outcomes.

Figure 1. The RSRC Definition of Recovery



The first statement of RIT proposes that "***successful, long-term recovery is self-evident***." Central to this statement is the fact that people who still engage in pathological cycles of destructive use and behaviors do not resemble people who have resolved their substance use and related issues. For example, a person who has spent five years intentionally working on their recovery journey looks, behaves, thinks, and lives in ways that are diametrically dissimilar to their former pathological selves and former lifestyles. Taken from the deconstructed identity models of recovery (Biernacki, 1986; McIntosh & McKeganey, 2000), the self, or the individual identity, is categorically different from the earlier, pre-recovery self. This prompts a range of important scientific questions - how did this change occur? What were the factors that initiated the momentum of change? Did it occur smoothly, or in bursts? What were the key variables at critical time points that allowed personal growth to take hold and progress?

The benefit of this first proposition in RIT is that it allows recovery scientists to resign from the arduous task of "proving" recovery as an outcome. Recovery scientists can instead focus their intellectual efforts at understanding how recovery comes to manifest in various ways across multiple life dimensions. This places the subjective experience of those in recovery as the central point of inquiry; allowing researchers to hold individual successful recovery up to the light and examine how it came to be. This also involves deconstructing and operationalizing the key factors, various turning points, and critical moments of recovery initiation and sustainment.

The second statement of RIT proposes that recovery is "***a fundamentally emancipatory set of processes***". This suggests that recovery is a bundle of dynamic experiences, both SUD-related and non-SUD-related, which occur over time and facilitate the movement of an individual from the general bondage of SUD pathology to the freedom of recovery. This is in line with much of the recovery movement, both in the US and abroad, and is particularly integrated with community mental health philosophy which seeks to provide those with mental health issues every opportunity to live by the least restrictive means possible (38 CFR 17.33, Patient's Rights). These processes also rely heavily on community-based and relational support (White, 2009). So too does recovery from SUD involve a movement toward greater states of freedom and agency that are facilitated by overcoming subjugating elements both within and outside of the individual over a period of time (Bandura, 1999; Ashford et al., 2018). This movement involves increasing psychological, social, and biological health within an ecologically supportive context. To date, this orientation has been envisioned through theoretical constructs such as recovery capital (Granfield & Cloud, 1999) and recovery-oriented systems of care (White, 2008).

Taken together, we see that each part of RIT allows the science of recovery to begin at a point of strength and positive growth (i.e. multidimensional recovery success) and work backward to define, operationalize, and measure major benchmarks of subjective recovery experiences. Over time, and in aggregate, supportive and healthy patterns involving relationships,

interventions, institutions, philosophies, and ecologies, are revealed. Longitudinally, this allows objective knowledge to manifest from emergent data. Previous research has shown that some variables such as mutual-aid participation, stable housing, and employment are common factors to recovery success (Neale et al., 2015). Yet, despite what we know, there is likely much more to discover.

Incorporating Lived Experience

The lived experience of those in recovery can be operationalized through RIT across a number of applications in and adjacent to SUDs (as well as those with other behavioral health disorders). These include education, prevention, practice, and research. The utilization of such experience - in essence, the subjective nature of recovery parsed at the individual level - is critical.

Education. Education is conceptualized here as the knowledge held by the public and by policy makers, as well as practitioners and scientists. The knowledge gap between those in recovery, politicians, and scientists has been a source of critical failure in policy making and public messaging (Oliver, Innvar, Lorenc, Woodman, & Thomas, 2014). RIT directly addresses this critical failure in prevention and education by providing the framework for bridging the gaps between the views of policy makers and the opinions of scientists by harnessing the knowledge of lived recovery experience as a translational tool. This re-interprets recovery from the subjective to the objective in ways that can be capitalized by policymakers and scientists alike. It is important to note that policymakers, practitioners, scientists, and individuals with lived experience are not philosophically at intentional odds but have convergent interests in many respects (Torrey, Rapp, Van Tosh, McNabb, & Ralph, 2005). One area policymakers and practitioners philosophically agree on is that the policies and practice are only as good as the data used to inform them. Recovery science has much to offer policy makers and scientists through a recovery-informed approach that capitalizes on the experience of recovery to inform multiple areas of policy, practice, and public service knowledge.

Leveraging the lived experiences of individuals has already been utilized in the area of interventions such as peer-based recovery support services (Bassuk, Hanson, Greene, Richard, & Laudet, 2016), which in some regions are reimbursable through Medicaid (Huebner, Hall, Smead, Wilauer, & Psoze, 2008). This provides a useful illustration for how the subjective experiences of those in recovery can be utilized at the intersection of policy and care in order to create cost-effective, informed, and salient interventions. These interventions can thus be aimed at using a recovery-informed approach, while concurrently remaining focused on the individual who is in need of recovery support and having such support delivered by a credible insider to the recovery experience.

Practice. Service to others in recovery is a primary focus of mutual-aid organizations, such as Alcoholics Anonymous (Laudet, Morgen, & White, 2006). This has carried over into the treatment field with many counselors and proprietors of recovery support services being in recovery themselves (Knudsen, Ducharme, & Roman, 2006). This has had both positive and negative impacts (Ashford & Brown, 2017). Positively, those involved in substance use and with lived experience are able to carve out a place of unique worth, even as a highly stigmatized population. However, the practice field also suffers a lack of professional education within the workforce ranks, especially in treatment settings, and the lack of scholarship on the topic; since many front-line substance use counselors have little time for research or evidence-based practice (Ashford, Brown, & Curtis, 2018). While this has improved in recent years, the call for more professionalized services and credentials, particularly from younger employees in the treatment field, is a factor today (Ashford & Brown, 2017). RIT in this respect may be used to capitalize on the benefits, while offsetting the negative drawback by utilizing lived experience to shape professional training and creating ways of incorporating patient reported goals and outcomes into service delivery. Operationalizing systematic, practical, and didactic interventions that are validated by those in successful recovery is likely to improve services beyond those empirically validated only. For example, Neale and colleagues (2015) demonstrated how engaging individuals in recovery could be used to evaluate a newly developed patient reported outcome measure the Substance Use Recovery Evaluator (SURE).

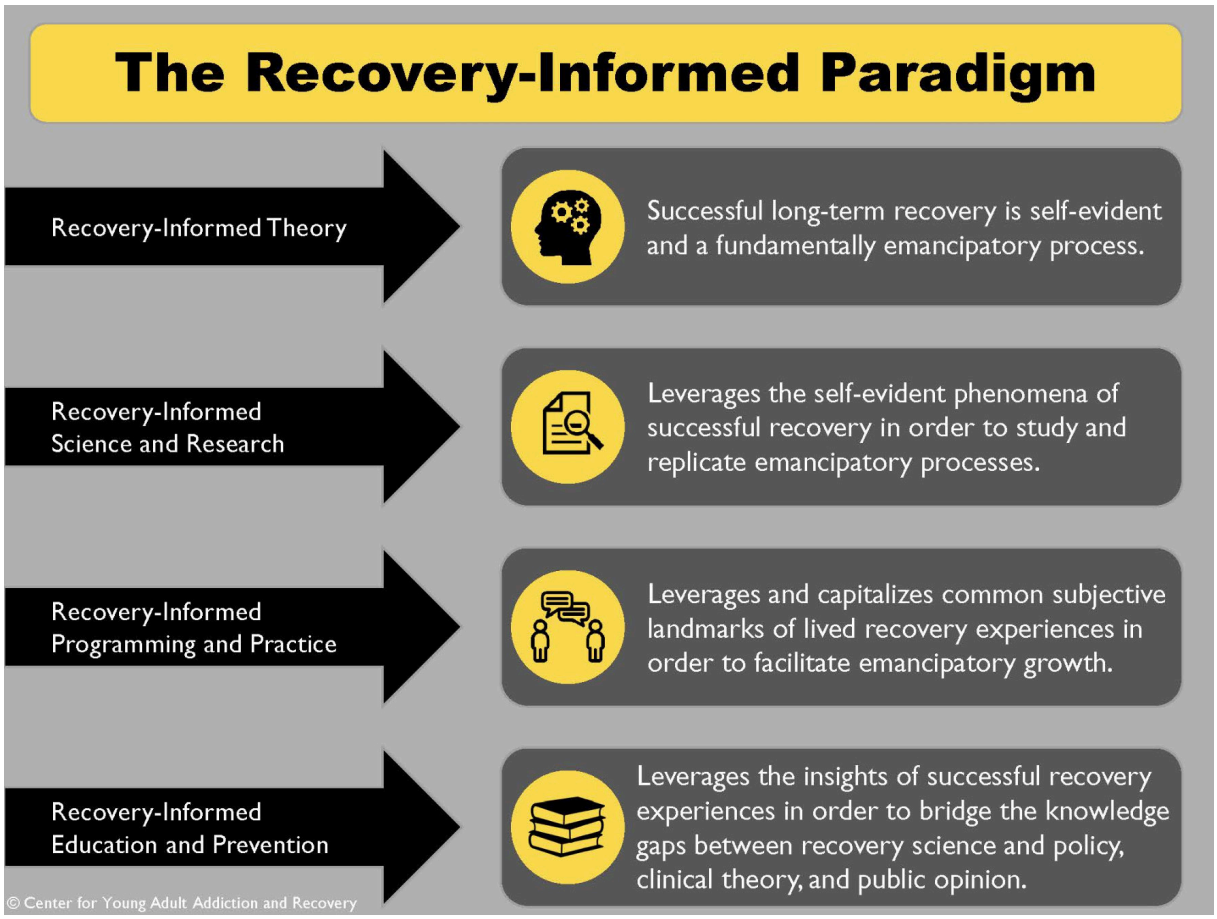
A scientific framework grounded in RIT can also inform the field of practice in meaningful ways by incorporating suggestions derived from lived experience. These suggestions can help create useful metrics, realistic outcome expectations, and help address common issues that create tension between the treatment marketers, practitioners, and the academics who write treatment manuals and journal articles on the subject. In this way, RIT can also help to ease the general distrust between the real world of counseling, treatment management, and the "ivory tower" of academic scholarship along with the suspicion toward advanced educational training.

A recovery-informed approach has led to the identification of the utility of comprehensive continuums of step-down care that produce significantly high rates of successful outcomes (Brown & Bohler, 2018). Such systems would be reliant on community-based support and peer-driven initiatives, while at the same time stressing the importance of such things as mutual aid, which is one of the most influential and predictive variables of stable outcomes (Kelly, 2017; Kelly, Myers, & Brown, 2000; Laudet, Morgen, & White, 2006). Treatments such as SUD pharmacotherapies and other medicalized interventions would pose less of a threat to the status quo if the study of such interventions incorporated research by individuals who fully understood their usefulness, as well as their limitations within the context of lived experience and not just in terms of health outcomes. In general, a more recovery-informed practice approach would directly address the needs of clients, allowing the clients and their counselors to define effective care, rather than third party payors and medical systems. This shifts the authority of expertise to those with the most lived experience along with professionals who utilize a RIT approach.

Prevention. Prevention is another area where the lived experiences of those in recovery may be useful (See figure 2). A RIT approach would promote visual and vocal advocates and recovery storytelling as a performative political action, thus emphasizing the need for personal experience in recovery to be center stage in policy and education formulation. With RIT, those who have recovered are granted a degree of expertise. Recovery provides wisdom and hindsight that the promoters of prevention efforts, such as policy makers, often lack. The "Just Say No" campaign, for example, was crafted by those with no practical experience and has been considered an abject failure (Hornik, Jacobsohn, Orwin, Piesse, & Kalton, 2008).

Leveraging the experiences of those in recovery allows open ended questions - what, if anything would have diverted a persons' descent into an addiction? At what point would intervention had been the most helpful? How should such messaging and interventions be crafted to appeal to young and vulnerable people, thus steering them away from a future of substance use? More importantly however, is to ask why an individual who descended into SUDs may have felt life was intolerable enough to require anesthesia. For example, the sense of "otherness" described by those in recovery (Larkin & Griffiths, 2002), and the various sources of such feelings may be better understood through a RIT approach.

Figure 2. The Recovery Informed Paradigm



While evidence varies as to the causes of SUD risk - ranging from childhood trauma and adverse childhood experiences (Dube, Anda, Felitti, Edwards, & Croft, 2002; Felitti, 2003; Khoury, Tang, Bradley, Cubells, & Ressler, 2010), co-occurring mental health disorders (Conway, Swendsen, Husky, He, & Merikangas, 2016), to socio-economics (Leventhal et al., 2015); these issues themselves may be the byproducts of the culture in which we live. Substance use as a means of quelling existential pain is a common theme (Wiklund, 2008; Thompson, 2012). Persistent anxieties and pressures exerted by the values held by society such as success and materialism may have an acute effect on certain sensitive individuals, with one such result of this environment being the development of SUDs (Tootle, Ziegler, & Singer, 2015). Those who have successfully survived SUD and flourished in recovery can answer these questions and more. Furthermore, discussions and collaborations with those in recovery can create more useful means of approaching young people, vulnerable populations, and marginalized identities at risk for SUD. This may lead to the creation of more engaging methodology to address the issues that are in and around substances such as family history (Copello, Templeton, & Powell, 2010), social perceptions (Phillips & Shaw, 2013), systemic oppression (Barry, McGinty, Pescosolido, & Goldman, 2014), discrimination (Ahern, Stuber, & Galea, 2007), and the role of authority (Andersen, 2014; Fraser et al., 2017).

Developing Recovery-informed Research

The study of successful recovery experience through RIT has the potential to make the largest impact in the development of research. Already, patient reported outcome measures (PROMs) informed by those in and adjacent to recovery are utilized in some areas of medical and mental health (Boyce, Browne, & Greenhalgh, 2014; Vodicka, Kim, Devine, Gnanasakthy, Scroggins, & Patrick, 2015; Neale, & Strang, 2015). New recovery scientists entering the field today may be in recovery themselves. Of note, many graduates from collegiate recovery programs continue to graduate-level study (Brown et al., 2018), thus greatly increasing first-hand knowledge on the topic of recovery within advanced education. While addiction research at institutions has received ample attention, there is a dearth of inquiry into the diversity and nuance of the recovery process (Kelly, Greene, & Bergman, 2018). For example, to facilitate recovery, individuals must be able to surmount multiple obstacles across various areas of their lives (Duffy & Baldwin, 2013; McQuaid, Jesseman, & Rush, 2018). These areas and obstacles often extend beyond the classical understanding as to the causes of addiction and risks of recurrence of substance use. A RIT approach would hold these personal experiences as a fundamental axiom of recovery science, thereby avoiding unilateral conclusions and limited conceptions of outcomes.

To best facilitate recovery, and research concerned with the process of recovery, it is important to have an interdisciplinary approach that considers cultural factors, psychological factors, sociological factors, medical variables, and neuroscience. These variables must also be considered in context of ecological factors such as the role of environments on personal development, systems of power and justice, as well as the role of policy, economics, and healthcare as it relates to recovery. The interdisciplinary bandwidth of recovery science should also span from academia to real-world systems and people. Critical lenses are needed to deconstruct and dismantle oppression, stigma, and discrimination around substance use and recovery. Post-structuralism is needed to create fundamentally new vistas and paradigms that govern how we conceptualize, initiate, treat, and ultimately support recovery and holistic wellness. Existential philosophy is needed to address the core functions of meaning and purpose upon which such paradigms, contours, materiel, and social understandings may rest. Combined, these areas constitute the experience of recovery. For the scientist, the question becomes one of variables, and effects, in each of these areas- both in isolation but also collectively.

Strategies. RIT rests upon the cataloging and analysis of the qualitative experiences of those in recovery. The theory is, at its core, the process by which the bulk of subjective experience may be transmuted into objective metrics and evidence by drawing conclusions from aggregate stories. It is an exercise in the cartography of human lives. By analyzing the major landmarks that occur along a set of recovery journeys, common factors, implications, and complexities emerge. Utilizing the lived experience of those in recovery to craft, inquire, and verify, much like the use of PROMs, can extend the validity and application of such knowledge.

Metrics. Metrics to measure recovery should consist of strengths-based measures. Existing metrics typically measure symptomatological indices and this reveals little about the etiology of wellness. Existing strengths-based metrics of recovery such as the Assessment of Recovery Capital (ARC; Laudet & White, 2008) and the SURE (Neale et al., 2016) are examples of metrics that have been informed and validated in collaboration with individuals in recovery. RIT can help expand both the conceptualization

and the validation of new metrics for use in the study of recovery. Several other measurements are also being utilized within recovery science: the recently developed short version of the ARC the Brief Assessment of Recovery Capital (Vilsaint et al., 2017), the Rosenberg Self-Esteem Scale (Rosenberg, & Black, 1971), the General Self-Efficacy Scale (Schwarzer, & Jerusalem, 1995), the WHO Quality of Life Scale (World Health Organization, 1995), the Human Flourishing Scale (Diener et al., 2010), and spiritual measures (Miller, 1998). Other metrics that examine locus of control, gratitude, emotional intelligence, and self-compassion may all be have the potential to change the landscape of recovery research and measurement as well (LaBelle, & Edelstein, 2018; Kelly, Greene, & Bergman, 2018, Collins, & McCamley, 2018; O'Sullivan, Xioa, & Watts, 2017; Harrison et al., 2018; Kastukas et al., 2014).

Conceptually, the study of emancipation driven by recovery-informed knowledge, may radically shift the measure of recovery phenomena. People who have recovered from SUD have unique understanding into what it means to be free from pathology. For example, a safe place to live, or an employer who is supportive of recovery have positive impacts on personal recovery growth in ways that may not be well understood or easy to measure from outside of recovery. Intrinsically, the measure of the relationship to oneself should improve as one moves through recovery. Metrics that capture self-esteem, self-efficacy, resiliency, and hope may all be useful in examining how an individual in recovery perceives themselves and how positive self-construal stabilizes their recovery. As the pathology of SUDs and co-occurring concerns largely manifest through relational aspects of individual lives (Kemp, 2009; DiClemente, 2018), instruments and metrics that gauge psychosocial functional gains, emotional growth, locus of control, helping behaviors, altruism, help-seeking, responsibility, and other relational areas are all important to clearly examine the phenomena as it occurs.

Finally, the most complex aspect of recovery, and consequently in the study of recovery, is in the impact of ecologies upon the individual. Bronfenbrenner (1979), in his seminal work on human development, argued that systems and environments are only useful if the individual moving within them experiences such ecologies as helpful to their personal challenges in meaningful ways. This means that no matter how scientifically sound, or evidence-based the ecological design may be; it will not be effective if it is not perceived to be beneficial to the individual in ways that meets their needs. A vast amount of existing sociological knowledge can be brought into the conceptualization and measurement of the recovery-supportive nature of various ecologies and contexts.

Discussion

From a theoretical standpoint, RIT is not a fundamentally radical idea. Rather, as a grand theory it is parsimonious and logical in our minds as an abstraction of the theoretical underpinnings guiding our recovery-related research day-to-day. By deconstructing existing practical theories - such as recovery capital, ROSC, and the social identity models of recovery - and reconstructing them in a manner as to explain the sociological phenomena of recovery, RIT provides a theoretical basis for recovery science to emerge and progress. To understand recovery, it should be studied where it occurs, under the conditions that initiate and sustain the phenomena, and informed by both the empirical and the subjective. Scientifically stepping out from under the shadow of pathology, into the light of wellness, is simple, yet the implications may be far reaching. Recovery science must be centered on these ideas; otherwise, it becomes merely an extension of the issues that have plagued the field of addiction sciences, such as measurement issues and acceptable parameters of outcomes (Laudet & Humphreys, 2013; Ashford et al., 2018). Measurement and structure within recovery science has to emerge from a recovery-informed perspective if we are to truly understand the mechanics of such radical transformations.

Translational research and the application of salient practices are at the heart of social interventions. Science is only as useful as its application to the real world. This is particularly true for social problems like SUD and other addictive disorders. SUDs often negatively affect every facet of the individual's life, from bank account to intimate relationships. Potential solutions to these issues cannot be focused upon the SUD alone, but rather, upon alleviating the manifestations of disorder as they occur across multiple dimensions of life. Interdisciplinary understanding are key in this respect as reductive methodologies will only produce limited effects and unilateral outcomes, sometimes at the expense of other gains.

Addiction and SUDs are complex. The solution will be no less complex. Holistic wellness, the restoration of function, and the global health of an individual is multifaceted and occurs over time and across various systems of support, from formal treatment to spiritual fulfillment. RIT offers the opportunity to establish a collective science that is primarily concerned with the collection and verification of what works for people and to replicate elements of life changing turning points that can guide people to wellness and health over extend periods of time.

Conclusion

Despite the ongoing public health crisis, there is an apparent disconnect between successful long-term recovery and the construction of it at the scientific level. If we are to alter the course of addiction care in the US, it is imperative to listen to those who have survived SUD and successfully achieved stable recovery. To borrow from Shumway and Kimball (2012), the essentials of recovery include hope and flourishing, identity, authenticity, and agency. These should be central to the study of recovery process. System design should promote ideas and science that provides evidence of efficacy, in order to measure that which matters most to those in recovery. When we situate the subjective experience of recovery success as the central theoretical point of possibility through a recovery-informed lens, we side step the common obstacles within the field and fundamentally recreate the entire concept from a place of strength. A recovery-informed approach takes the aggregate knowledge of those in recovery, translates it into science, and further translates knowledge into practice, education, prevention, and treatment.

Amidst a crisis, we must ask specific questions about what we can do. We must inquire and identify the best ways to provide effective and salient means of addressing the issue that will be sustainable and, perhaps, even revolutionary. We believe RIT is the most parsimonious route we can take as a field. A recovery-informed orientation starts with what we know to be true based on experiences, then synthesizes and operationalizes such active knowledge into a cohesive approach and theoretical stance. New ways of looking at recovery can create new ways to facilitate recovery through means that are sensitive to the individuals with SUDs and their wellness needs.

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