Recovering to Recovery Among Adolescent Youth

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Introduction

In 2015, it was estimated that ~1.3 million youth aged 12–17 years and 5.4 million young adults aged 18–25 years were in need of substance use treatment (Substance Abuse and Mental Health Services Administration, 2016). Of those individuals, 6.3% of youth and 7.7% of young adults received substance abuse treatment through a specialty facility in the past year (SAMHSA, 2016). Although the number of the youth who identify as recovering or in recovery through formal or informal treatment is not known, estimates of youth substance misuse, based on rates of met and unmet treatment need suggest that the number is sizeable. Despite the need, limited empirical research has been dedicated toward understanding the recovering process or recovering outcomes. This knowledge gap is not unique to the youth literature and extends to the adult literature as well.

Why Recovering Is Important

The United States Drug Control Policy now includes the promotion of recovery as a targeted area (Office of National Drug Control Policy, 2016). However, little foundational work has been conducted with recovering adolescents. Instead, the focus has generally been placed on intervention barriers and predictors of relapse. Understanding adolescent recovery, distinct from that of adults, is a paradigm shift and is important for a variety of reasons. Defining and understanding adolescent recovery is critical for growing the evidence base for both treatment and recovery

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support services as well as for research. Treatment targets can be expanded and refined through a better understanding of what adolescent recovering may or may not encompass. In addition, prevention efforts can be enhanced by understanding the skills and resources acquired while recovering and developing programs to enhance those factors in primary, secondary, and tertiary prevention programs.

This chapter provides an overview of selected factors related to adolescents recovering from substance use, a framework for thinking about recovering, a critical overview of definitions of adolescent recovery, and factors that can support recovering. Recovering is defined in this chapter as a process of change through which an individual achieves improved heath, wellness, and quality of life. This chapter also overviews selected factors, which have been found to be associated with adolescents recovering. In addition, promising recovering supports and approaches that do not work are presented.

A Common Theoretical Framework for Substance Use and Recovering

A bio/psycho/social/spiritual theoretical framework (Leukefeld & Leukefeld, 1999) proposes a way of thinking about substance use. The framework includes four possible pathways or combinations of pathways that influence the likelihood of substance misuse. Traditionally, the bio/psycho/social/spiritual framework is utilized to help organize thinking around the pathways leading to substance misuse. *Biological* pathways include genetic heritability and neurobiological factors that modulate drug-taking behavior. *Psychological* pathways incorporate individual characteristics that influence motivation such as, expectancies of rewards of substance use, personality factors such as urgency and sensation seeking, and thoughts and attitudes towards substance use. *Social and environmental* pathways include laws, culture, family norms, customs, and peer associations related to substance abuse. *Spirituality* is inversely related to substance use (Gmel et al., 2013; Staton, Webster, Hiller, Rotosky, & Leukefeld, 2003; Staton-Tindall et al., 2008) and refers to an individual's perceptions, beliefs, and feelings about a higher power, universal spirit, or ultimate purpose (Green, Fullilove, & Fullilove, 1998; Watkins, 1997).

This same framework can be applied to think about recovering pathways. *Biological recovering* pathways can include return to homeostatic neurobiology following a reduction or cessation of substance use, utilization of medication-assisted treatment when indicated (including pharmacogenetic interactions), and physical health supporting recovering outcomes (Marks & Leukefeld, 2017). *Psychological* recovering pathways incorporate individual characteristics that influence motivation such as, expectancies of rewards associated with alternative (i.e., non-substance-related) reinforcers and consequences of substance use, personality factors, mental health, as well as thoughts and attitudes about recovering. *Social and environmental* recovering pathways include laws, culture, family norms,

customs, and peer associations related to recovering behavior. *Spiritual* recovering pathways can introduce a sense of purpose, life meaning, and connection with a higher power. Although the clinical literature is fairly consistent in the idea that spirituality is protective, related to recovery, and important for the process of recovering, it is not without controversy, particularly as spirituality, for some, may intersect with religiosity. Bio/psycho/social/spiritual pathways have also been expressed through the framework of recovery capital, which refers to the quantity and quality of individual and environmental factors (e.g., physical, human, social, cultural capital) that support recovering outcomes (Granfield & Cloud, 2001).

Defining Recovering

Definitions of recovering vary across stakeholders. Within the recovering community, there are many different recovering paths and such lived experience shapes each individual's understanding of what recovering looks like and what it does not look it (Kaskutas & Ritter, 2015; Laudet, 2007). Likewise, formal treatment providers, tradition-based providers, policy makers, mutual-help based, and self-help based service providers define recovering based on outcomes deemed relevant by their program and/or profession. Furthermore, definitions of recovering are bounded by factors including culture, place, and time.

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines recovering as, "a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential" (SAMHSA, 2012). In contrast, the Hazelden Betty Ford Foundation defines recovering as, "a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship" (Schwarzlose, 2007).

Similarities and differences between definitions of recovering highlight three important points. First, common to both definitions is the subtle but critical nuance that recovering is an active and ongoing engagement in change over an undetermined period of time rather than an endpoint. Evidence supports recovering as continuing, rather than an acute care model. Second, the primary outcomes or benchmarks of recovering vary across definitions. Indeed, the only common recovering outcome between definitions is health. Third, current definitions of recovering were not developed for adolescents. As noted by Botzet, McIlvain, Winters, Fahnhorst, and Dittel (2014), this is a problem compounded by the fact that diagnostic criteria for substance use disorders were validated among adults rather than adolescents. As such, it may be that meaningful definitions of recovering cannot be established until age-appropriate criteria for substance misuse are developed.

Although definitions of recovering may be intended for broad applicability, some recovering outcomes may be developmentally inappropriate for adolescents. For example, citizenship is traditionally referencing employment; a goal that is not relevant or achievable for many youth. Living a self-directed life may also be incongruent with the developmental and environmental factors operating in youth's

lives. Recovering physical health is an important outcome for recovering adults, particularly women (Marks & Leukefeld, 2017). However, it may not be the case for adolescents who have not experienced the same physical consequences of sustained, chronic use. Focus groups examining adolescents' thoughts and attitudes around recovering outcomes indicate that lifestyle improvement, personal change and growth, personal control related to substance use, and wellness are more important and salient factors (Gonzales, Anglin, Beattie, Ong, & Glik, 2012a).

Perhaps most salient in definitions of recovering is the inclusion or exclusion of abstinence. For adolescents, abstinence may not be perceived as an essential feature of recovery. For example, research on adolescents in a variety of treatment settings indicates that only 10% of adolescents would include total abstinence in their definition of recovery (Gonzales et al., 2012a). A similar study assessing adolescent's motivation for abstinence while in treatment revealed that about one fifth endorsed their motivation for total abstinence (Chung et al., 2015). Instead, nearly half the youth reported a goal of temporary abstinence, occasional use, or controlled use. This suggests an abstinence model of recovery, which is aligned with the chronic, progressive disease model, may not resonate or be useful for youth. However, Myers and Brown (1996) reported that abstinence-focused cognitions and behaviors were more predictive of subsequent problem alcohol use than perceived self-efficacy to abstain. Consequently, the extent to which adolescents include abstinence as a recovering goal may impact their long-term recovery. Harm reduction is an alternative pathway to abstinence. However, harm reduction among adolescents is complicated by factors such as the legality of any use and the demonstrated importance of protecting against the neurotoxic effects of substances during the sensitive neurodevelopmental period of adolescence. In contrast to the objective outcomes of more formal definitions, others assert that an individual is recovering when they say they are recovering (e.g., Connecticut Community for Addiction Recovery (CCAR), 2017). However, it is difficult to ascertain progress in recovery if developmentally appropriate, quantifiable outcomes are not established, understood, and used.

Relapse and Recovering

Relapse is a part of the recovering process. Rates of relapse among adolescents, like adults, are high with estimates of 66–85% returning to substance use 1 year following inpatient treatment (Brown & D'Amico, 2003; Brown, Gleghorn, Schuckit, Myers, & Mott, 1996; Kaminer, 2001; Winters, Stinchfield, Opland, Weller, & Latimer, 2000). Rather than thinking of recovering and relapse as two fixed points on a continuum, the state of recovering can be thought of as the distance between the two points (Leukefeld, 2015). Recovering can then represent a temporal distance from the last episode of relapse. As an individual is recovering, a greater temporal distance is placed between relapse and recovering. Definitions of relapse vary, particularly among adolescents (see Chung & Maisto, 2006), but total

abstinence from any substance of abuse is one standard by which many assess whether a relapse has taken place (Miller, 1996). However, parameters which can impact determination of relapse include duration of recovery or abstinence, amount of substance the individual has returned to using, the negative consequences associated with that use, and the type of substance used (Chung & Maisto, 2006). Definition of relapse used can impact decisions about treatment duration, treatment effectiveness, and the mechanisms which support behavior change (Maisto, Pollock, Cornelius, Lynch, & Martin, 2003).

Adolescents are more likely to relapse when experiencing social pressure when compared with adults (Ramo & Brown, 2008). Conversely, social support is one factor associated with increased time to relapse following treatment among adolescents (Myers & Brown, 1996). This finding is consistent with the well-documented impact of peer influence, both positive and negative, on substance-use behavior during adolescence (Leukefeld et al., 1998). Research from focus groups including youth similarly report that peer pressure is one of the five most common perceived reasons for relapse (Gonzales, Anglin, Beattie, Ong, & Glik, 2012b). Other important factors include feeling unable to cope with negative emotions, negative life stressors, low motivation and confidence, craving, and environmental factors such as cues and triggers.

What Works to Support Recovering Outcomes

Pathways to recovering among adolescents vary and may not be mutually exclusive. Currently, a common, evidence-based pathway to recovering includes substance abuse treatment either in residential or outpatient settings. For many adolescents, this may begin involuntarily through the influence of parents, courts, the juvenile justice system, or school systems. A common notion of recovery is that recovering begins during or following the completion of treatment. However, as Moberg and Finch (2008) correctly point out, the majority of individuals who meet criteria for a substance use disorder do not receive treatment. The proportion of adolescents who change their substance use behavior on their own without formal intervention (i.e., "natural recovery") is unknown, but likely large (Sobell, Ellingstad, & Sobell, 2000). Thus, recovering cannot be contingent upon formal treatment.

A conceptual framework that considers recovering as a continuous process of multidimensional change is the Recovery-Oriented Systems-of-Care (ROSC; Kaplan, 2008). Adopted by the Substance Abuse and Mental Health Services Administration, ROSC provides a framework for utilizing evidence-based programs and understanding their relationship within a continuum of care. A ROSC framework is described as a coordinated network of community-based services including prevention, early intervention, treatment, and recovery support services (Kaplan, 2008). Movement within this continuum is a continuous process of multidimensional change and thus requires a wide array of individualized, person-centered services. Furthermore, programs and services are implemented to capitalize on strengths and

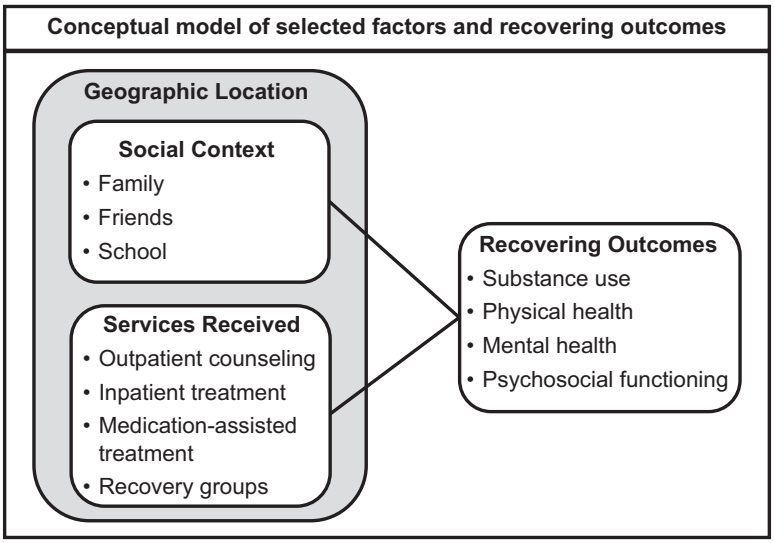

Fig. 1 Example conceptual model of selected environmental factors and recovering outcomes. Created by authors, Marks and Leukefeld (2017)

resiliencies, rather than barriers. By identifying strengths, youth along with treatment providers can build on assets to support recovering outcomes. Key to this conceptual framework is an emphasis on the variety of resources within the environment that recovering individuals can access (e.g., intervention services, social support; see Fig. 1). Examples of recovering supports within the community include recovery community centers, sober living environments, education and employment, transportation, life-skills development, and involvement in recovery groups. The ROSC framework is also based on a continuing care model in which the psychosocial supports can be accessed long-term. Although the ROSC is not evidence-based for adolescents, services and programs for adolescents within this framework should be evidence-based or evidence-informed.

Converging preclinical and clinical evidence indicates that environmental factors are critical in maintaining behavior change (Bouton, 2014). Environmental factors include places in which youth are recovering and persons with whom youth are recovering (Volkow, Koob, & Mclellan, 2016). Geographic location is a key environmental factor that can support recovering. In the USA, ~16% of youth 18 years of age and younger live in nonmetropolitan, rural areas (US Department of Health and Human Services, 2015). Substance use risk factors vary across rural and urban areas (Keyes, Cerdá, Brady, Havens, & Galea, 2014). For example, youth living in rural areas are more likely to use tobacco, smokeless tobacco, alcohol, and methamphetamine than youth living in urban areas (Gale, Lenardson, Lambert, & Hartley, 2012; Gfroerer, Larson, & Colliver, 2007; Hanson et al., 2009; Hutchison & Blakely, 2003; Zollinger, Saywell, Overgaard, Przybylski, & Dutta-Bergman, 2006; but see Hanson et al., 2009; Warren, Smalley, & Barefoot, 2016). Variation in

substance use can be attributed to differences in age, region, dates of data collection, and rural context (e.g., weakening economies, decreasing isolation, and destabilization of traditional family structures (Dew, Elifson, & Dozier, 2007). Geographic location can also be associated with differential access and utilization of intervention services (Oser, Harp, O'Connell, Martine, & Leukefeld, 2012; Rosenblatt, Andrilla, Catlin, & Larson, 2015).

What Might Work to Support Recovering Outcomes

Recovery Schools

School plays a central role for adolescents and often represents the primary social venue for peer interaction and support. Among drug-using adolescents, school is often an environment with drug use and drug-using peers (Isakson & Jarvis, 1999). For recovering adolescents, returning to a drug using environment, as is often the case for adolescents who have few alternative choices, can precipitate relapse through exposure to triggers and risk factors such as school stress (Chung & Maisto, 2006; Moberg & Finch, 2008). Recovery schools or "sober schools" have emerged as a continuing care resource for high school students who are recovering from substance use and oftentimes have received specialized treatment prior to enrolling. Recovery schools, some under the accreditation of the Association of Recovery Schools, meet state educational requirements for awarding a secondary diploma.

In addition to meeting academic requirements, recovery schools can provide a therapeutic environment with wraparound services. Recovery school programming varies widely and can include services pertaining to physical heath, mental health, legal, education, family involvement, coordination of social services, and relapse prevention. Key to the rationale of recovery schools is the expectation that peer support and mutual self-help is necessary for recovering adolescents. These resources and services are key to a recovery-oriented system of care model which supports a continuum of person-centered, community-based service system (Kaplan, 2008).

Evidence based research on the effectiveness of recovery schools is lacking. This is due, in part, to the relatively low number of existing schools, the diversity of services within schools, and the rapid turnover of students within a school year (Moberg, Finch, & Lindsley, 2014).

However, evidence that recovery schools might be effective comes from studies showing significant reductions in self-reported substance use and improvements in mental health and family relationships among adolescents who remain in RC schools (Finch, Moberg, & Krupp, 2014; Moberg & Finch, 2008). Academic success is associated with school retention (Gibson, 1997), which in turn can decrease risk of relapse as well as substance misuse in adulthood. However, recovery schools currently lack racial and socioeconomic diversity and therefore results may or may

not generalize to non-white students with a lower socioeconomic status and no history of formal treatment (Glaude & Torres, 2016).

Similar to high school recovery communities, collegiate recovery communities and collegiate recovery programs serve to support recovering while remaining engaged in educational pursuits. Unlike recovery high schools which are specifically designed for recovering students, collegiate recovery communities are situated within colleges and universities and provide resources and support to navigate postsecondary education while recovering in a potentially abstinence-hostile environment (Cleveland, Harris, Baker, Herbert, & Dean, 2007). Responding to the need for on-campus services (e.g., counseling), drug and alcohol-free housing, and a recovering community of peers, collegiate recovery communities such as the Association of Recovery in Higher Education (https://collegiaterecovery.org/ and Young People in Recovery (http://youngpeopleinrecovery.org) are proliferating college campuses. The evidence base for collegiate recovery programs, however, is lacking due to substantial heterogeneity in the programs and services offered across campuses (Laudet, 2008). Data collected by these programs indicate that the model is promising, with low rates of relapse and academic performance that average or above average (Laudet, Harris, Kimball, Winters, & Moberg, 2014).

Self-Help Groups

Self-help groups that may or may not be based on the 12-step model may support recovering outcomes. However, recovering support groups specifically designed for adolescents are uncommon. Rather, adult groups are utilized by adolescents. Available adolescent-specific evidence is limited both in quantity and quality, largely due to the inherent limitations of observational research and selection bias. However, existing research indicates that youth who participate in 12-step groups have better outcomes 1–2 years post-treatment (Alford, Koehler, & Leonard, 1991; Hsieh, Hoffman, & Hollister, 1998; Kelly, Myers, & Brown, 2000, 2002). For example, in a study examining rates of abstinence 8 year's post-treatment, adolescents who believed they could not use substances in moderation and those with greater addiction severity scores were more likely to attend Alcoholics Anonymous and/or Narcotics Anonymous (AA/NA) meetings (Kelly, Brown, Abrantes, Kahler, & Myers, 2008). Furthermore, self-reported abstinence was positive correlated with AA/NA attendance up to 8 years following treatment. The composition of self-help groups can also influence outcomes. Among young adults who have recently completed treatment, a more similar age composition among the 12-step attendees may enhance the positive effects of 12-step participation. However, have a more diverse age composition (i.e., older individuals with longer lengths of recovery) may be more beneficial for young adults established in a 12-step program and pursuing long-term recovery.

What Does Not Support Recovering Outcomes

Gender contributes to the risks and resiliencies that impact recovering outcomes, although the effects are complex and variable. As such, programs that are not responsive to gender-specific needs do not work. Gender-responsive treatment interventions from research on women have demonstrated promise (Bougard, Laupola, Parker-Dias, Creekmore, & Stangland, 2016; Greenfield, Back, Lawson, & Brady, 2010). For example, decreased substance use was observed in women participating in a women-only treatment program emphasizing factors such as trauma and self-esteem as compared to mixed-gender treatment program (Prendergast, Messina, Hall, & Ward, 2011). Strength-based, trauma-informed recovery support is therefore critical for recovering adolescent females.

A key factor for adolescent females is social context and evidence suggests that adolescent females may be more sensitive to social context and environmental cues than adolescent males (Kennedy, Epstein, Phillips, & Preston, 2013; Robbins, Ehrman, Childress, & O'Brien, 1999). Social context refers to the social setting in which females are recovering and includes family and friends. As posited by the Relational Model, relationships are highly significant to females and influence drug use and risk behavior (Covington, 1998; Covington & Surrey, 1997; Finkelstein & Piedade, 1993; Knudsen, Staton-Tindall, Oser, Havens, & Leukefeld, 2014). For example, having a recovery-oriented interpersonal network predicts decreased alcohol use (Granfield & Cloud, 2001; Humphreys, Moos, & Cohen, 1997; Weisner, Delucchi, Matzger, & Schmidt, 2003) and a substance-using partner predicts relapse among females (Grella, Scott, Foss, Joshi, & Hser, 2003). The interpersonal networks of recovering women are likely to be small (El-Bassel, Chen, & Cooper, 1998; Manuel, McCrady, Epstein, Cook, & Tonigan, 2007) and retain many friends and family members who actively use substances and do not provide recovery support (Greenfield et al., 2007; Grella, 2008; Laudet, Morgen, & White, 2006). Furthermore, relationships with substance-using network members increase the likelihood of substance use and do not support recovering outcomes (Rivaux, Sohn, Armour, & Bell, 2008; Warren, Stein, & Grella, 2007; Wenzel, Tucker, Golinelli, Green, & Zhou, 2010). For women who do report having family members who provide support during the treatment, emotional support, and a sense of loyalty and commitment, recovering outcomes are improved (Brown, Tracy, Jun, Park, & Min, 2015).

A network of recovering indivdiuals who can provide community, decreased isolation, an opportunity for honesty within a safe space, and peers with positive attitudes and goals are also associated with positive recovering outcomes (Brown et al., 2015). However, relationships that do not support recovering outcomes, often substance-using family and friends, are often retained in a woman's life. For example, Brown and colleagues (2015) reported that one strategy recovering women may use is to isolate those network members and closely manage the distance of those members within their lives. Recovering adolescent females, however, may not have the

resources or capacity to control their proximity to such risky relationships and likely need the support of adults to help regulate their personal network.

Comorbid mood disorders, anxiety disorders, and serious psychological stress are also stronger predictors of substance use for women than men. Adverse childhood experiences, particularly exposure trauma, are a significant risk factor for substance use (Garland, Pettus-Davis, & Howard, 2013) and rates of physical or sexual abuse among treatment-seeking females range from 55% to 99% (Najavits, Weiss, & Shaw, 1997). Untreated psychiatric comorbidity has been associated with poor recovering outcomes and is likely to persist after successful substance abuse treatment (Bukstein, Glancy, & Kaminer, 1992; Grella, Hser, Joshi, & Rounds-Bryant, 2001; Wise, Cuffe, & Fischer, 2001). As such mental health support should also be included in the recovery support system, particularly for adolescent females (e.g., Back, Payne, Simpson, & Brady, 2010).

Summary

Recovering is an active and ongoing engagement in change over time rather than an endpoint and relapse can be part of the process. However, specific recovering definitions and outcomes (e.g., abstinence, personal growth, wellness) for adolescents have not been established. This reflects that lack of research on adolescents more broadly, as well as the broader focus on treatment outcomes rather than long-term recovering outcomes. Recovering supports include recovery community centers, sober living environments, education, transportation, and life-skills development. Recovering support groups and self-help groups are promising practices, but additional data is needed to rise to the level of evidence based. Gender contributes to the risks and resiliencies that impact recovering outcomes, although the effects are complex and variable. As such recovering supports which are not gender-responsive do not work. For recovering adolescent females, strength-based, trauma-informed recovery support is often indicated. More adolescent-centered research is essential to better understand the unmet needs of recovering adolescent and identify evidence-based recovering supports. Such research needs to be grounded in the experiences of adolescents and validated with instrumentation designed for adolescents.

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