A Statewide Representative Estimate of Youth Substance Use Disorder Recovery

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Abstract

Although recovery is a central tenet of the U.S. substance use disorder (SUD) service delivery system, research on youth recovery remains significantly underdeveloped. Notably, no representative surveys exist anywhere in the world that currently assess recovery status among secondary school-aged youth (ages 14-18). This article presents the first statewide representative estimate of youth in recovery, derived from a large Midwestern state in the United States. We used data from the 2024 Illinois Youth Survey (IYS), a weighted statewide representative survey of Illinois youth. We examined the prevalence of youth in recovery per the widely-used item “Do you consider yourself to be in recovery?” We also ran descriptive analyses to better understand the characteristics of youth in recovery. We found that 5.1% (95% CI: [4.3 : 5.8]) of participating youth identified as being in recovery. Among those in recovery, there were slightly more males (54%), and the average age of recovering youth was 16.57. Youth in recovery were demographically diverse, and a majority received free and reduced lunch. Thus, efforts to address financial recovery capital may be particularly important for this population. This study offers the first population-based estimate of youth recovery prevalence and underscores the importance of incorporating recovery status into major surveys to improve recovery support systems.

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Abstract

Although recovery is a central tenet of the U.S. substance use disorder (SUD) service delivery

system, research on youth recovery remains significantly underdeveloped. Notably, no representative surveys exist anywhere in the world that currently assess recovery status among secondary school-aged youth (ages 14-18). This article presents the first statewide representative estimate of youth in recovery, derived from a large Midwestern state in the United States. We used data from the 2024 Illinois Youth Survey (IYS), a weighted statewide representative survey of Illinois youth. We examined the prevalence of youth in recovery per the widely-used item “Do you consider yourself to be in recovery?” We also ran descriptive analyses to better understand the characteristics of youth in recovery. We found that 5.1% (95% CI: [4.3 : 5.8]) of participating youth identified as being in recovery. Among those in recovery, there were slightly more males (54%), and the average age of recovering youth was 16.57. Youth in recovery were demographically diverse, and a majority received free and reduced lunch. Thus, efforts to address financial recovery capital may be particularly important for this population. This study offers the first population-based estimate of youth recovery prevalence and underscores the importance of incorporating recovery status into major surveys to improve recovery support systems.

Keywords: Recovery, Adolescents, Substance Use Disorder, Epidemiology

Highlights:

- The first study to report the percent of high school youth in substance use recovery in a statewide representative survey in the Midwestern United States.
- Prevalence of substance use recovery was 5.1%.
- Makes arguments for including substance use recovery items on national and international surveys involving youth.

Introduction

Recovery is undoubtedly an organizing principle of the United States' substance use disorder (SUD) service delivery system. For example, the U.S. Surgeon General's report has a dedicated chapter on recovery (Office of the Surgeon General, 2016) and federal and state agencies have the word "recovery" appearing in their organizations' names. For example, the Substance Abuse and Mental Health Services Administration (SAMHSA) has an Office of Recovery. Additionally, nationally representative epidemiological studies have measured substance use recovery among adults. Based on a study that used data from the National Survey of Drug Use and Health (NSDUH), about 8% of adults consider themselves to be in substance use recovery (Jones et al., 2018).

Focusing on recovery is part of a broader effort to frame substance use disorders (SUD) as treatable health problems and to destigmatize the millions of Americans that have recovered from them. Major advances have been made in humanizing people in recovery from SUD through research on stigma (Kelly and Westerhoff, 2010, Shatterproof, 2024), the development of collegiate recovery programs (Hennessey et al., 2023) and drawing on the lived experience of recovered persons in response to the recent opioid crisis (Gormley et al., 2021).

With few exceptions, however, what is known about the pathways into and benefits from recovery throughout the world is almost entirely based on adult research. In this article, we argue that it is time to further study youth substance use recovery among those under age 18, the age of majority in the U.S. Specifically, a good starting place would be to estimate the national prevalence of youth in recovery. No nationally representative data source has examined the prevalence of youth in recovery (Office of the Surgeon General, 2016) in the United States. One large, albeit non-representative study, estimated that 4.9% of 10th graders and 4.6% of 12th graders (roughly ages 16-18) may consider themselves to be in recovery (Smith et al., 2023). Here we address a major weaknesses of that prior study by using a statewide representative survey done in 2024.

Methods

Ethics Approval and Study Description. Human subjects approval was obtained at the authors' institution. The study is approved for a waiver of parental consent, with parental notification and opt out procedures in place. Survey data was collected through the 2024 Illinois Youth Survey (IYS), a biennial survey of youth in grades 8, 10 and 12. Data were collected in classroom settings between the months of January and June in 2024. Multiple criteria were applied to ensure that data are valid (Kosgolla et al., 2023).

The IYS uses a two-stage stratified cluster sampling design, including all Illinois public schools with 8th, 10th, and 12th grades, excluding specialized institutions. (In the United States education is compulsory through age 16, with grades 9-12 preceding entry into university studies.) In the first stage, schools are randomly selected using a Probability Proportional to Size approach to account for differences in grade-level enrollment and student distribution across four geographic regions (Chicago, Suburban, Urban, and Rural). In the second stage, a fixed number of students is randomly chosen within each selected school and grade. The data are then weighted to ensure that they are representative of the Illinois student population.

The 2024 IYS weighted dataset includes 10,490 students from 153 randomly selected schools. This study uses the subset of high school students (n=7,020) to whom we administered an item on recovery status.

Measures. The IYS is primarily used as a prevention survey, with most items derived from the Communities that Care survey (Arthur et al., 2002). It includes a wide range of demographic measures, risk factors for initiating substance use, items and scales on substance use and related consequences, and a variety of other health and safety measures.

The primary item of interest in this study was recovery status. Recovery was measured with a single dichotomous item (yes/no) used in prior adult research (Jones et al., 2018, Kelly et al., 2018). The item wording was: "Do you consider yourself to be in recovery?" Prior to displaying this item, instructions prompted students to only consider substance use in their reply. This was done to avoid

inadvertent measurement of the concept of mental health recovery.

Analyses. Descriptive data on the percentage of youth in recovery and demographic characteristics of youth in recovery are presented.

Results

Overall**,** 5.1% of youth in this study (95% CI: [4.3 : 5.8]) indicated that they were in recovery. (See Table 1.)

Table 1. Overall prevalence of recovery

	Recovery (Yes) N (%)	***Recovery (No) N (%)***
Youth in 10th and 12th grade ***(All)***	329 (5.1)	6,137 (94.9)
Age (mean)	16.57	16.53

Table 2 presents the demographic characteristics of youth who responded to the recovery question. A majority of the youth in recovery were male (54.1%), with an average age of 16.57. Prevalence varied slightly by grade, depending on whether youth were in 10th (4.7%) or 12th grade (5.5%). Prevalence varied geographically, ranging from 3.8% (small cities) to 6.7% (major metropolis). Specifically, the prevalence (95% CI) of recovery was 6.7% [4.2 : 9.2] in Chicago, 5.1% [4.0 : 6.1] in suburban Chicago, 3.8% [2.2 : 5.3] in Urban areas, and 5.7% [3.8 : 7.3] in rural areas. Recovering youth were demographically diverse with 37.7% Latino/Latina, 33.2% White, 18% African American/Black, 5.1% Asian and 6.1% Other Race. The percentage of youth in recovery that received free or reduced priced lunches, a marker of low income, was 55.4% and 8%.

Table 2. Prevalence across demographic group and characteristics of those in recovery

	Youth in Recovery (N)	***Recovery Prevalence (%)***	***Proportion of Youth in Recovery (%)***
Gender			
Female	146	4.7%	44.3%
Male	178	5.5%	54.1%
Prefer not to answer	5	6.1%	1.6%
Race			
White	109	3.1%	33.2%
Black/African American	59	7.8%	18.0%
Latino/Latina	124	8.3%	37.7%

Asian American	17	4.3%	5.2%
Any Other	20	7.6%	5.9%
Grade			
10th	159	4.7%	48.4%
12th	170	5.5%	51.6%
Region			
Suburban Chicago	184	5.1%	55.9%
Chicago	56	6.7%	16.9%
Other Urban/Suburban	50	3.8%	15.1%
Rural	40	5.6%	12.1%
Free/Reduced Lunch			
Free lunch	177	7.3%	55.4%
Reduced price lunch	26	7.6%	8.0%
Neither	117	3.2%	36.7%

Discussion

In this Midwestern US state, 5.1% of youth indicated they were in recovery from substance use. Based on the total number of students in this state, that equates to 6,979 tenth graders and 7,822 twelfth graders. Comparably, about 4% to 8% of adults in the United States indicate that they are in recovery (Jones et al., 2018, Kelly et al., 2018).

Based on this and other work, we urge national epidemiological studies to start measuring youth recovery. First, these estimates will help with better planning and development of recovery support for adolescents. For example, recovery high schools, specially designed to support youth in recovery, are only available in some areas. Second, compared to small clinic-based studies of adolescent recovery, those based on large epidemiological designs can capture a wide variety of recovery pathways, including non-abstinent recovery. There are many definitions of recovery (Office of the Surgeon General, 2016). Regrettably, we know little about non-abstinent youth in recovery (Finch et al., 2020), although small studies suggest that many youth are interested in this pathway (Smith et al., 2024). Third, asking about youth recovery on epidemiological surveys may lead to new insights due to the identification of recovery hot spots. That is, it would enable researchers to evaluate whether systems-level initiatives in recovery promotion (i.e., recovery community organizations) are working. Also, some dimensions of recovery capital, broadly defined as resources

that may be important for entering and sustaining recovery (Hennessy et al., 2019), are likely to vary geographically. For example, financial recovery capital, or having the financial resources to pay for treatment, be food secure, or have affordable housing, all vary geographically. Thus, recovery capital variables measured at the county or state level could be integrated with epidemiological data on youth recovery to determine their impact. Next, studying recovery internationally will permit cross-national studies of the phenomenon of recovery. There are likely differences in the presentation and concept of recovery internationally. Finally, youth recovery may be a critical prevention indicator in the future. Although recovery is generally thought of as a treatment outcome in existing patient placement criteria for substance use disorders, youth recovery could also be thought of as a prevention indicator in the broader health context. That is, youth in recovery could reasonably be expected to be healthier as adults on a number of outcomes.

Limitations. The following limitations apply to this study. First, data for this study were self-reported by adolescents. Second, the estimates for 12th graders in the Chicago strata may be less reliable due to small sample sizes at randomized schools and lower student participation. However, as the majority of students (55%) live in suburban school districts, the slightly higher recovery estimates in Chicago may only result in a slight upward bias on the statewide prevalence rate. Furthermore, we note that the overall prevalence rate is quite similar to that previously reported (4.3%, Smith et al., 2023). Third, estimates should not be extrapolated to other states or countries. Future research is needed to understand if estimates vary nationally or internationally. We note, however, that Illinois is the sixth largest state in the U.S. at the time of this study, with a population of 12,710,158. Fourth, because the data source is a prevention survey, some variables of interest are unavailable (e.g., recovery supports, SUD diagnoses). Finally, the IYS excludes alternative schools. Thus, although representative of the mainstream schools, estimates of youth in recovery may have been higher or lower if they were included.

Conclusion

Recovery is an organizing concept of the U.S. substance use disorder service delivery system, which is why it is peculiar that there is no national estimate of youth recovery. This statewide representative survey of a large Midwestern US state found that 5.1% of youth in 10th and 12th grades considered themselves to be in recovery. We strongly encourage the adoption of a recovery status item on national and international epidemiological studies involving adolescents under the age of majority. Doing so may lead to better recovery support planning, a better understanding of non-abstinence recovery pathways, more recovery hotspot research, and determining whether youth recovery is both a treatment outcome and protective factor for future health status.

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