Comparing Different Methods for Assessing Substance Use Post-Release Among Justice-Involved Youth

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Introduction

❖1.8 million adolescents met criteria for at least one substance use disorder in 2023. Justice-involved (JJ) youth are at heightened risk of substance use (SU) and risky behavior (Zaploski et al., 2019)

❖Monitoring individual differences in SU such as initiation, escalation of use, progression, and reductions can be used to identify key prevention and intervention opportunities in this population.

❖One measurement tool for assessing substance use (SU) is the timeline follow back (TLFB; Sobell et al., 1996). Compared to other global self-report measures, TLFB uses calendar dates to obtain a nuanced depiction of SU behaviors, such as number of days used, initiation date, number of times of use per day.

❖The current study examines the validity of TLFB in capturing two common substances: alcohol and cannabis by using the validity criterion of the Substance Use Involvement Scale (SUIS; Ridenour et al., 2023).
1)Alcohol and cannabis use (yes/no),
2)The cumulative number of days of alcohol and cannabis use, and
3)The average daily use frequency for youth who have initiated alcohol and cannabis use post-release.

Table 1. Demographic Information (*N* = 89)

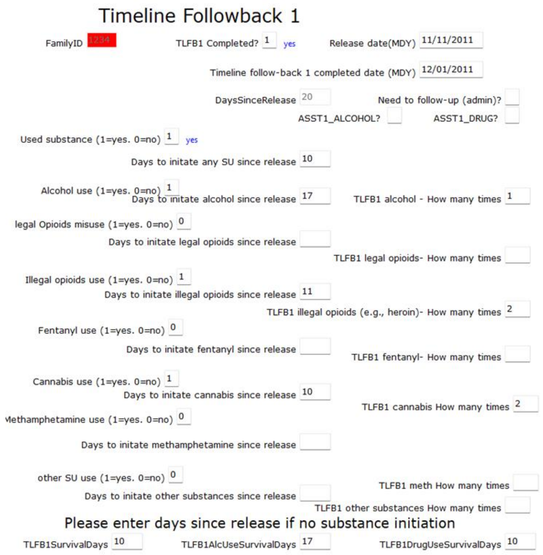
Demographic	Response	Percentages
Sex	*Male*	82%
	Female	18%
Race	*American Indian/Alaskan Native*	<1%
	Asian	<1%
	Native Hawaiian/Pacific Islander	1%
	Black/African American	31%
	White	13%
	Hispanic/Latine	44%
	More than one race	8%
	Other	2%
Age	*M(SD)*	16.1(1.0)
Days Post-Release at Assessment	*Min.- Max. (M)*	8-228 (53.7)

Figure 1. Example TLFB

Calendar outlining number of alcoholic beverages consumed each day.

2011	SUN	MON	TUES	WED	THURS	FRI	SAT
					1 New Year's Day 2	2 8	3 9
JAN	4 6	5 5	6 0	7 0	8 12	9 6	10 10
	11 0	12 0	13 0	14 0	15 0	16 0	17 0
	18 0	19 M. Luther King 0	20 0	21 0	22 0	23 0	24 0
	25 0	26 0	27 0	28 0	29 0	30 20	31 18
FEB	1 13	2 0	3 0	4 0	5 0	6 16	7 12
	8 2	9 0	10 0	11 0	12 0	13 0	14 Valentine's 4
	15 4	16 Pres. Day 0	17 0	18 0	19 3	20 5	21 9
	22 0	23 0	24 0	25 0	26 0	27 21	28 8
MAR	1 0	2 0	3 0	4 0	5 0	6 12	7 11
	8 0	9 0	10 0	11 0	12 0	13 0	14 0
	15 0	16 0	17 St. Patrick's Day 0	18 0	19 0	20 0	21 0
	22 0	23 22	24 18	25 21	26 22	27 12	28 27
	29 23	30 12	31 25	1 14	2 25	3 0	4 0

Figure 2. Data entry application for TLFB entry



Method

❖Data for this project were collected from youth participating in the Leveraging Safe Adults project (LeSA; see Knight et al., 2021 for more information).

❖Substance Use Involvement Scale (SUIS): Measured substance use in the last 30 days, and average frequency of use each day.
- Example Item: "Since your release from facility, how many days did you use marijuana?" Responses ranged from 0-30 days.

❖Timeline Follow-Back (TLFB): Measured day-by-day use of substances and the frequency of use each day (see **Figure 1** for example TLFB; see **Figure 2** for data entry example).

Results

❖A chi-squared test revealed that SUIS reported a significantly greater number of youth that indicated cannabis use, $p \leq .001$, and alcohol use, $p \leq .001$, than TLFB.

❖Paired samples t-tests found that SUIS and TLFB did not differ in cumulative number of days of cannabis use, $p = .404$.

❖SUIS and TLFB did not differ in cumulative number of days of alcohol use, $p = .061$.

❖Paired samples t-tests demonstrated that SUIS reported more frequent use per day of both cannabis and alcohol compared to TLFB reports, $ps \leq .001$.

❖See **Table 2** for descriptive statistics.

Table 2. Descriptive statistics

Substance – Measure	SUIS *M(SD)*	TLFB *M(SD)*	*N*	*p*
Cannabis - % Yes	16% (14)	12% (11)	89	≤.001
Alcohol - % Yes	12% (11)	11% (10)	89	≤.001
Cannabis – Days	2(7)	2(7)	88	.404
Alcohol – Days	1(4)	1(2)	88	.061
Cannabis – Average Frequency	2(2)	1(2)	89	≤.001
Alcohol – Average Frequency	2(2)	1(2)	70	≤.001

Discussion

❖ TLFB provided more in-depth results for individual participants' SU patterns including date of initiation post-release and day-by-day frequencies of use.

❖ Additional strategies are needed to optimize intensive process of data capturing and to support external validity for long-term SU.

❖ SUIS adequately captured data for sporadic SU without overwhelming number of data points, working well for comparing broad patterns of SU.

Limitations

❖ The data were positively skewed because the majority of the participants did not report SU post-release. Thus, the skewed distribution should be taken into consideration for interpreting the results.

❖ Both measures required adolescent self-reported data which may be prone to error such as recall inaccuracies.

Future Directions

❖ Future studies should preferentially use each measure in accordance with their research goals.

❖ Utilizing multiple data collection methods such as self-report and biological tests could provide a more comprehensive understanding of JJ youth SU post-release.

References
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