

# Consistency of self-reported drug use events in a mixed methods study of injection drug users



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## Introduction

- Research approaches that employ mixed methods are increasingly common in public health [1,2].
- Little is known about the consistency of information provided during quantitative and qualitative portions of studies.
- Life course theory [3] focuses on the time and timing, trajectories and transitions, critical periods, and accumulated risk at which important events occur within a person's life.
- Forward telescoping refers to reporting that an event occurred more recently than it did in actuality [4].
- Past research suggests that age of onset for drug use exhibits consistent ordering (e.g. alcohol use occurs prior to marijuana use) but inconsistent reporting of age in repeated measures studies [5].

## Objective

- To illustrate the use of the intraclass correlation coefficient (ICC) to assess the consistency of age of onset of drug use/injection provided during a mixed methods study of injection drug users (IDUs).

## Methods

- Age of onset of heroin use and injection, methamphetamine use and injection, marijuana use, powder cocaine use and injection, and crack cocaine use was collected during an interviewer administered computer-assisted personal interview followed by an in-depth qualitative interview.
- Qualitative and quantitative data combined by entering all events with age/date data onto a timeline.
- Onset of use/injection items extracted from timelines for analysis.

## Results

*Descriptive statistics and ICC for age of onset of drug use and injection*

Event	n	Qualitative		Quantitative		Difference (Quant – Qual)		% concordant			ICC (95% CI)
		Mean (SD)	Range	Mean (SD)	Range	Mean (SD)	Range	diff=0	d≤ 1 yr		
Marijuana use	73	13.0 (3.56)	2-19.5	13.6 (3.59)	3-25	.6 (2.83)	-6, 10.5	37.0	61.6	.68 (.54, .79)	
Cocaine use	55	21.1 (7.18)	12-43	21.6 (7.80)	11-45	.5 (4.33)	-10, 15.5	34.6	52.7	.83 (.73, .90)	
Methamphetamine use	44	27.0 (10.92)	12-52	28.7 (11.70)	12-52	1.6 (7.17)	-23, 22	18.2	43.2	.79 (.65, .88)	
Heroin use	69	28.6 (9.77)	12-47	30.1 (10.40)	12-58	1.5 (5.08)*	-16, 17	39.1	52.2	.87 (.78, .92)	
Crack cocaine use	33	26.9 (10.53)	14-63	25.5 (8.58)	14-41	-1.3 (6.19)	-23, 13	33.3	51.5	.79 (.62, .90)	
Injection (any drug)	100	30.3 (10.61)	12-52	31.8 (10.50)	12-58	1.6 (4.72)**	-11, 22	44.0	61.0	.90 (.82, .94)	
Powder Cocaine injection	22	27.8 (10.25)	16-46	27.7 (10.81)	14-44	-.1 (2.96)	-5, 7	31.8	59.1	.96 (.91, .98)	
Methamphetamine injection	35	33.2 (12.33)	13-54	36.0 (12.67)	15-56	2.7 (5.54)**	-1, 22	48.6	68.6	.88 (.74, .94)	
Heroin injection	72	30.5 (9.90)	12-47	32.0 (10.36)	12-58	1.5 (4.36)**	-16, 17	38.9	59.7	.90 (.83, .94)	

Asterisk indicates significant difference between qualitative and quantitative measurement at \* $\alpha = .05$  and \*\* $\alpha = .01$ .

## Participants

- 104 IDUs residing in Los Angeles, California (n=50) and San Francisco, California, USA (n=54) who had injected within 30 days of interview and were 30+ years of age
- Participants were 63% male, 89% aged 40+, 71% HS educated, 89% US born, 57% currently homeless, 32% black, 32% white, and 22% Latino.

## Analytic Plan

- Data analyzed separately by drug use/injection event.
- Events not included in analysis if data was missing for either the quantitative or qualitative measure.
- ICCs were calculated using the ICC(A,1) formula [6].
- Repeated measures t-tests were used to tests for significant differences between qualitative and quantitative measures.
- Stata/IC 12.1 used for all analyses.

## Results

- Participants reported being significantly younger at age of onset when assessed using qualitative methods for heroin use, injection of any drug, methamphetamine injection, and heroin injection.
- ICCs for onset of drug use were lower than ICCs for onset of drug injection.

## Discussion

- Data suggest that qualitative and quantitative techniques result in data adequately consistent with one another to assess age of onset.
- While the ICC quantifies the level of consistency between quantitative and qualitative measurements, there is no formal scale for assessing ICC values.
- Forward telescoping may have occurred during the quantitative portion of the study.
- Question interpretation may have affected the results for those IDUs who had stopped their drug use and began again.

## References

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