

Evidence of Directionality in Epidemiological Studies of Adults

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May 21, 2007

NCS-2 Study Design

Baseline NCS

- Nationally representative face-to-face household survey
- English-speakers, ages 15-54
- September 1990 to February 1992
- n = 8098 respondents (82.4% response rate)
- n = 5877 Part II respondents over-sampled the young and people with disorders
- WHO CIDI for DSM-III-R disorders

NCS-2 Study Design

NCS-2

- Face-to-face follow-up survey of Part II NCS respondents
- A decade after the NCS
- N = 5001 respondents (87.6% of living NCS respondents; 72.2% of baseline)
- WHO CIDI for DSM-IV disorders

Substances assessed in the NCS and NCS-2

- Tobacco
- Alcohol
- Sedatives-tranquilizers
- Stimulants
- Analgesics
- Marijuana-hashish
- Cocaine
- Heroin-opiates
- Inhalants
- Hallucinogens
- Ecstasy and related club drugs (NCS-2 only)

Dimensions of substances assessed

- Age-of-onset (AOO) of use
- Lifetime and 12-month quantity-frequency of use
- Recency of use
- Lifetime prevalence of AOO of abuse (not for nicotine)
- Recency of abuse (not for nicotine)
- Lifetime prevalence and AOO of dependence
- Recency of dependence

Transitions studied

- I. Among baseline lifetime nonusers
 - Onset of use, abuse, and dependence
- II. Among baseline lifetime non-abusing users
 - Persistence of use
 - Onset of abuse and dependence
- III. Among baseline lifetime non-dependent abusers
 - Persistence of use and abuse
 - Onset of dependence
- IV. Among baseline lifetime dependent users
 - Persistence of use, abuse, and dependence

Controls included in the models

I. Socio-demographics

- Age
- Gender
- Race-ethnicity

II. Baseline substance history

- AOO of use
- Quantity-frequency of use
- History of abuse and dependence
- Speed of transition to abuse and to dependence
- Multivariate substance use profile

Baseline mental disorders included in the models

I. Mood Disorders

- Major depressive disorder
- Dysthymic disorder
- Bipolar disorder

II. Anxiety disorders

- Generalized anxiety disorder
- Panic disorder
- Phobia
- Post-traumatic stress disorder

III. Impulse-control disorder

- Conduct disorder
- Antisocial personality disorder
- ADHD*
- IED*

* Only assessed in the NCS-2

Nicotine transitions studied

	Use %	Dependence %	(n)
Among baseline lifetime nonusers			
Onset of use and dependence	9.7	6.1	(2662)
Among baseline lifetime non-dependent users			
Persistence of use	46.4	--	(1368)
Onset of dependence	--	37.7	(1368)
Among baseline lifetime dependent users			
Persistence of use and dependence	29.7	42.7	(971)

Alcohol transitions studied

	Use %	Abuse %	Dependence %	(n)
Among baseline lifetime non-users				
Onset of use, abuse and dependence	47.6	9.8	1.8	(1249)
Among baseline lifetime non-abusing users				
Persistence of use	53.1	--	--	(2066)
Onset of abuse and dependence	--	19.1	2.8	(2066)
Among baseline lifetime abusers				
Persistence of use and abuse	60.2	6.6	--	(669)
Onset of dependence	--	--	3.7	(669)
Among baseline lifetime dependent users				
Persistence of use, abuse and dependence	57.7	9.4	4.6	(1018)

Drug transitions studied

	Use %	Abuse %	Dependence %	(n)
Among baseline lifetime non-users				
Onset of use, abuse and dependence	14.8	2.6	0.9	(2013)
Among baseline lifetime non-abusing users				
Persistence of use	14.5	--	--	(2127)
Onset of abuse and dependence	--	6.5	2.0	(2127)
Among baseline lifetime abusers				
Persistence of use and abuse	30.9	3.9	--	(333)
Onset of dependence	--	--	5.1	(333)
Among baseline lifetime dependent users				
Persistence of use, abuse and dependence	33.6	7.9	11.5	(529)

Associations of baseline mental disorders with subsequent first onset of smoking and nicotine dependence among baseline lifetime nonsmokers

Baseline disorders	Onset of nicotine use OR	Onset of dependence OR
Anxiety	2.1*	2.9*
Mood	1.4	1.5
Impulse control	1.7*	2.4*
Any disorder	1.7*	2.6*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of smoking and first onset of nicotine dependence among baseline lifetime nondependent smokers

Baseline disorders	Continuation of nicotine use OR	Onset of dependence OR
Anxiety	1.1	1.4*
Mood	1.1	2.1*
Impulse control	1.1	1.7*
Any disorder	1.0	1.6*

*Significant at the 0.5 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of smoking and nicotine dependence among baseline lifetime dependent smokers

Baseline disorders	Continuation of nicotine use OR	Continuation of dependence OR
Anxiety	1.5*	2.0*
Mood	1.6*	1.2
Impulse control	2.1*	2.1*
Any disorder	1.7*	2.1*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of drinking, alcohol abuse, and alcohol dependence among baseline lifetime nondrinkers

Baseline disorders	Onset of alcohol use OR	Onset of abuse OR	Onset of dependence OR
Anxiety	1.2	1.2	1.5
Mood	1.4	1.3	-
Impulse control	1.4	2.8*	6.8*
Any disorder	1.2	2.0*	4.5*

* Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of drinking and first onset of alcohol abuse and dependence among baseline lifetime non-abusing drinkers

Baseline disorders	Continuation of alcohol use OR	Onset of abuse OR	Onset of dependence OR
Anxiety	0.8	1.2	1.6
Mood	0.8	1.4	1.8
Impulse control	1.1	1.4	2.4*
Any disorder	.96	1.3	1.3

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of alcohol use and abuse and first onset of dependence among baseline lifetime alcohol abusers

Baseline disorders	Continuation of alcohol use OR	Continuation of abuse OR	Onset of dependence OR
Anxiety	0.8	1.5	2.7
Mood	1.0	0.6	0.6
Impulse control	0.8	0.9	3.2*
Any disorder	0.7	0.9	3.7*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of alcohol use, abuse, and dependence among baseline lifetime dependent drinkers

Baseline disorders	Continuation of alcohol use OR	Continuation of abuse OR	Continuation of dependence OR
Anxiety	0.7	1.2	2.2
Mood	0.8	0.9	1.2
Impulse control	1.2	1.5	2.3*
Any disorder	0.8	1.5	4.7*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of marijuana use among baseline lifetime nonusers and continuation of marijuana use among baseline lifetime users

Baseline disorders	Marijuana	
	Onset OR	Continuation OR
Anxiety	1.3	1.1
Mood	1.0	0.9
Impulse control	2.9*	1.4*
Any disorder	2.0*	1.2

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of cocaine use among baseline lifetime nonusers and continuation of cocaine use among baseline lifetime users

Baseline disorders	Cocaine	
	Onset OR	Continuation OR
Anxiety	1.0	0.7
Mood	1.3	0.5
Impulse control	2.6*	2.1
Any disorder	1.9*	1.1

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of sedative or tranquilizer use among baseline lifetime nonusers and continuation of sedative or tranquilizer use among baseline lifetime users

Baseline disorders	Sedatives and tranquilizers	
	Onset OR	Continuation OR
Anxiety	1.6	1.9*
Mood	1.2	1.1
Impulse control	3.3*	1.5
Any disorder	1.9*	2.2

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of stimulant use among baseline lifetime nonusers and continuation of stimulant use among baseline lifetime users

Baseline disorders	Stimulants	
	Onset OR	Continuation OR
Anxiety	1.2	0.7
Mood	1.3	1.2
Impulse control	3.0*	2.5
Any disorder	2.0*	2.7*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of analgesic use among baseline lifetime nonusers and continuation of analgesic use among baseline lifetime users

Baseline disorders	Analgesics	
	Onset OR	Continuation OR
Anxiety	1.5	1.3
Mood	1.6	2.1
Impulse control	2.5*	2.1
Any disorder	2.1*	3.7*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of inhalant use among baseline lifetime nonusers and continuation of inhalant use among baseline lifetime users

Baseline disorders	Inhalants	
	Onset	Continuation ¹
	OR	OR
Anxiety	0.4	-
Mood	1.3	-
Impulse control	3.9*	-
Any disorder	3.4*	-

*Significant at the .05 level, two-sided test

¹No cases continued to use at time 2

Associations of baseline mental disorders with subsequent first onset of heroin or opiate use among baseline lifetime nonusers and continuation of heroin or opiate use among baseline lifetime users

Baseline disorders	Opiates	
	Onset OR	Continuation OR
Anxiety	1.1	0.1
Mood	1.2	0.5
Impulse control	5.8*	5.6
Any disorder	3.4*	0.4

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of hallucinogen use among baseline lifetime nonusers and continuation of hallucinogen use among baseline lifetime users

Baseline disorders	Hallucinogens	
	Onset OR	Continuation OR
Anxiety	1.0	1.2
Mood	1.4	0.4
Impulse control	3.0*	26.3
Any disorder	1.8*	5.4

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent first onset of any illicit drug use, abuse, and dependence among baseline lifetime nonusers of any illicit drug

Baseline disorders	Onset of illicit drug use OR	Onset of abuse OR	Onset of dependence OR
Anxiety	1.6*	2.1*	5.2*
Mood	1.4	0.4*	1.3
Impulse control	3.0*	3.7*	5.2*
Any disorder	2.2*	2.8*	4.5*

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of illicit drug use and first onset of drug abuse and dependence among baseline lifetime non-abusing drug users

Baseline disorders	Continuation of illicit drug use OR	Onset of abuse OR	Onset of dependence OR
Anxiety	1.1	1.8*	1.2
Mood	1.2	1.2	0.9
Impulse control	1.4*	4.3*	3.6*
Any disorder	1.2	2.4*	1.6

*Significant at the .05 level, two-sided test

Associations of baseline mental disorders with subsequent continuation of drug use and abuse and first onset of dependence among baseline lifetime drug abusers

Baseline disorders	Continuation of illicit drug use OR	Continuation of abuse OR	Onset of dependence OR
Anxiety	0.6	0.5	0.5
Mood	0.9	0.1	4.6
Impulse control	1.5	1.0	2.1
Any disorder	1.2	0.6	1.8

Associations of baseline mental disorders with subsequent continuation of drug use, abuse, and dependence among respondents with baseline lifetime illicit drug dependence

Baseline disorders	Continuation of illicit drug use OR	Continuation of abuse OR	Continuation of dependence OR
Anxiety	1.3	1.1	1.6
Mood	0.8	1.6	1.9
Impulse control	1.6*	3.2*	2.0
Any disorder	1.4	1.7	4.8*

*Significant at the .05 level, two-sided test