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Drinking Trajectories From Adolescence to the Mid-Forties Among Alcohol Dependent Men

D. N. Howell, T. Jacob, K. K. Bucholz, C. Sartor & P. Wood

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ABSTRACT

Objective:

The purpose of this study was to identify differences in developmental pathways of alcoholism from onset of drinking into middle adulthood.

Method:

Alcohol-related behaviors and psychiatric status were assessed in 330 men having a lifetime diagnosis of alcohol dependence (AD). Using the Lifetime Drinking History (LDH) (Skinner and Sheu, 1982), distinct drinking phases were identified which differed in terms of quantity, frequency and context of drinking.

ABSTRACT

Results:

Using Latent Growth Mixture Modeling, a 4-class model was identified: Severe-Persistent Problem Drinkers (SPPD); Severe-Limited Problem Drinkers (SLPD); Young Adult Problem Drinkers (YAPD); and Late Adult Problem Drinkers (LAPD).

Conclusions:

Present findings support the existence of different alcoholism trajectories and provide a more complete understanding of the variability of alcohol dependence over time.

SPECIFIC AIMS

To identify an alcoholism classification system based on differences in developmental course.

- Fundamental in building theories of alcoholism etiology and course over the lifetime
- Important for clarifying diagnostic issues and implementing treatment/intervention strategies

ALCOHOLISM TYPOLOGIES

- Typologies have been constructed around various dimensions:

  - Severity
  - Drinking patterns
  - Chronicity
  - Comorbidity
  - Etiology

- A core aspect in differentiating alcoholism subgroups is the developmental nature of drinking over one's lifetime.

  - Comparisons of community and treatment samples point to differences in alcohol-related symptoms and behaviors (Bucholz, et al, 1994; Schuckit et al., 1995)

ALCOHOLISM TYPOLOGIES

- Studies of drinking from adolescence to young adulthood have investigated the development characteristics of problem drinking
  (Bennett et al., 1999; Schulenberg et al., 1996; Chassin et al., 2002; Jackson et al., 2000; Hill, et al., 2000)

- Most of the relevant literature has identified two prevalent patterns
  - unremitting/chronic use
  - reduction in problem drinking

QUESTIONS IN SEARCH OF ANSWERS

- What happens during subsequent years?

- Do the patterns stabilize after young adulthood or does variability and change continue?

- Do other drinking pathways emerge at later ages which could not be anticipated from young adult studies?

♦

The current study investigates the course of alcohol use from drinking onset to the fourth decade of life as a means for classifying subtypes of alcoholism.

PARTICIPANTS

VIETNAM ERA TWIN REGISTRY (VETR)

- 330 men who at sometime in their life met lifetime DSM-IV AD criteria as assessed by the Lifetime Drinking History (LDH) and who were 41 years of age or older at the time of assessment.

PRIMARY ASSESSMENT DOMAIN

LIFETIME DRINKING HISTORY

- Phase data was converted into 'person-year' data beginning with the year the person first became a regular drinker and ending at 41 years of age

DATA ANALYSES

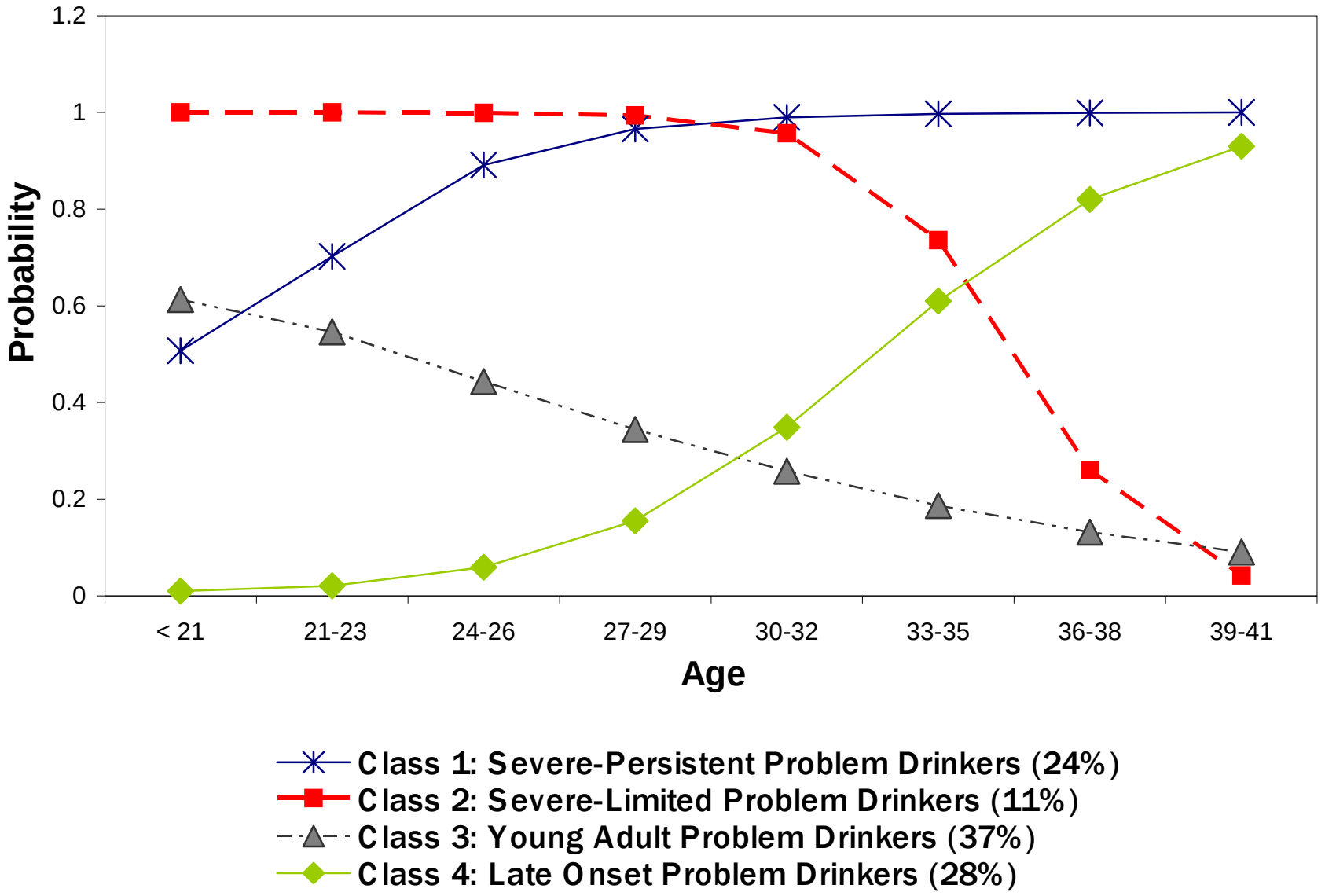
LATENT GROWTH MIXTURE MODELING

- Diagnosing probabilities (DPs) - odds of diagnosing at a given age group - determined class membership
- estimates used to assign individuals to a particular class

CLASS CHARACTERISTICS

- CLASS 1 – SEVERE-PERSISTENT PROBLEM DRINKERS (SPPD)
- CLASS 2 – SEVERE-LIMITED PROBLEM DRINKERS (SLPD)
- CLASS 3 – YOUNG ADULT PROBLEM DRINKERS (YAPD)
- CLASS 4 – LATE ADULT PROBLEM DRINKERS (LAPD)

Diagnosing Probabilities For Each Of Four Latent Classes



Lifetime Psychiatric Diagnoses Across Classes

	SPPD	SLPD	YAPD	LAPD	P^2	
	n = 77.68	n = 37.24	n = 123.71	n = 91.37	DF	p
Drug Dependence	25%	34%	19%	19%	3	0.17
Nicotine Dependence	66%	68%	68%	68%	3	0.98
Antisocial Personality Disorder*	15%	8%	5%	5%	3	0.047
Depression	22%	21%	19%	17%	3	0.85

SPPD=Severe-Persistent Problem Drinkers

SLPD=Severe-Limited Problem Drinkers

YAPD=Young Adult Problem Drinkers

LAPD=Late Adult Problem Drinkers

Drinking Characteristics Across Classes

	SPPD n = 77.68		SLPD n = 37.24		YAPD n = 123.71		LAPD n = 91.37		F or P[2]	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	DF	p
Age First Drink	15[bc]	2.6	14[c]	2.6	16[ab]	2.6	16[a]	2.9	326	0.001
Age First AD	21[b]	3.3	18[d]	2.4	22[c]	2.8	34[a]	4.2	326	0.000
Age First AB or AD	20[a]	3.2	18	2.1	21[a]	2.7	28	7.2	326	0.000
Age First AD sx	19[ab]	2.7	17[b]	2.2	20[a]	2.6	24	6.7	326	0.000
	Any Phase		Any Phase		Any Phase		Any Phase			
Binge Drinking*[a]	14%		39%		19%		13%		3	0.002
Drinking - Alone*[a]	37%		34%		19%		29%		3	0.039
Drinking - Mornings	5%		3%		2%		7%		3	0.320
Ever Sought Treatment	41%		61%		24%		36%		3	0.004

SPPD=Severe-Persistent Problem Drinkers

YAPD=Young Adult Problem Drinkers

SLPD=Severe-Limited Problem Drinkers

LAPD=Late Adult Problem Drinkers

FINDINGS

Counterparts for three of these trajectories can be found in the larger alcoholism literature and now provide a more complete understanding of their developmental nature

Developmentally Limited Alcoholism
Antisocial Alcoholism
Negative Affect Alcoholism
(Zucker, 1994)

The fourth type – Severe-Limited Problem Drinkers - has not been previously described, notwithstanding its seeming importance and prevalence.

These findings build on the larger alcoholism literature identifying alcoholic subgroups and provide important information regarding alcoholism trajectories and associated features

LIMITATIONS/FUTURE DIRECTIONS

Future studies are needed with regard to:

- better understanding the psychosocial influences related to the different alcoholism trajectories
- characterizing the different trajectories as individuals transition into older age
- finer grain, longitudinal studies clarifying the nature of these different alcoholism classes

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