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ABSTRACT

Background: A family history of serious problem drinking remains the single most powerful predictor of male alcoholism. Nevertheless, the methods used to define a family history of alcoholism are markedly inconsistent. Several years ago, we compared 9 different methods of defining familial alcoholism in a longitudinal study of the antecedents of male alcoholism. The Tri-Level Method was found to be superior. The 50-year predictive validity of the Tri-Level Method of defining familial alcoholism was examined in a longitudinal study of Danish men designed to identify the predictors of alcoholic drinking. The subjects were drawn from a birth cohort of 9,182 babies born between 1959 and 1961. Two-thirds were sons of hospitalized alcoholics. **Method:** One-hundred-forty-five consecutively studied men completed a comprehensive examination at age 50 that included structured interviews, psychometric tests and archival hospital information. Each subject was classified according to the Tri-Level Method that is based upon the subject's report: Level 1=no first degree alcoholic relative (N=30); Level 2=only one first degree relative with alcoholism (N=59); and Level 3=two or more first degree relatives with alcoholism (N=56). Drinking outcomes and other dimensions of psychosocial functioning (e.g., SF-36) were evaluated over the lifetime of the subjects. **Results:** The Tri-Level Method significantly distinguished those subjects who would become alcoholic (Chi-Square = 16.7, p<0.0002). It also predicted the severity of problem drinking over their lifetime (F= 18.4, p<0.0001). The method was associated with other forms of psychopathology, behavioral deviance, psychological distress, health-related problems, and psychosocial functioning at age 50. **Conclusion:** The Tri-Level Method of defining familial alcoholism proved to be a highly efficient predictor of male alcoholism and its effects after 50 years. Presence of multiple first degree alcoholic relatives is associated with more functional impairment at 50 across the major dimensions of living.

PURPOSE

To compare the 50-year drinking and psychosocial outcomes of a large sample of Danish men at high risk of developing a drinking problem according to the Tri-Level Method of defining familial alcoholism.

METHODS

Between 1959 and 1961, a Danish birth cohort of 8,949 consecutive pregnant women were extensively studied before, during, and after the birth of their baby(ies) in search of the causes of birth defects. A total of 9,125 offspring survived until the 12th week of pregnancy; a total of 8,440 biological fathers were identified.

All archival sources were searched for evidence of alcoholism in the biological fathers; all sons of alcoholic fathers (N= 210) were identified and a carefully matched control group (N=110) was formed. All of the subjects were extensively studied with a variety of methods:

Psychosocial interviews **Medical examinations**
Psychiatric examination **Rating scales from both examiner and subjects**
Archival hospital and psychiatric data

At the 50-year follow-up 156 men were examined; an additional 53 had died.

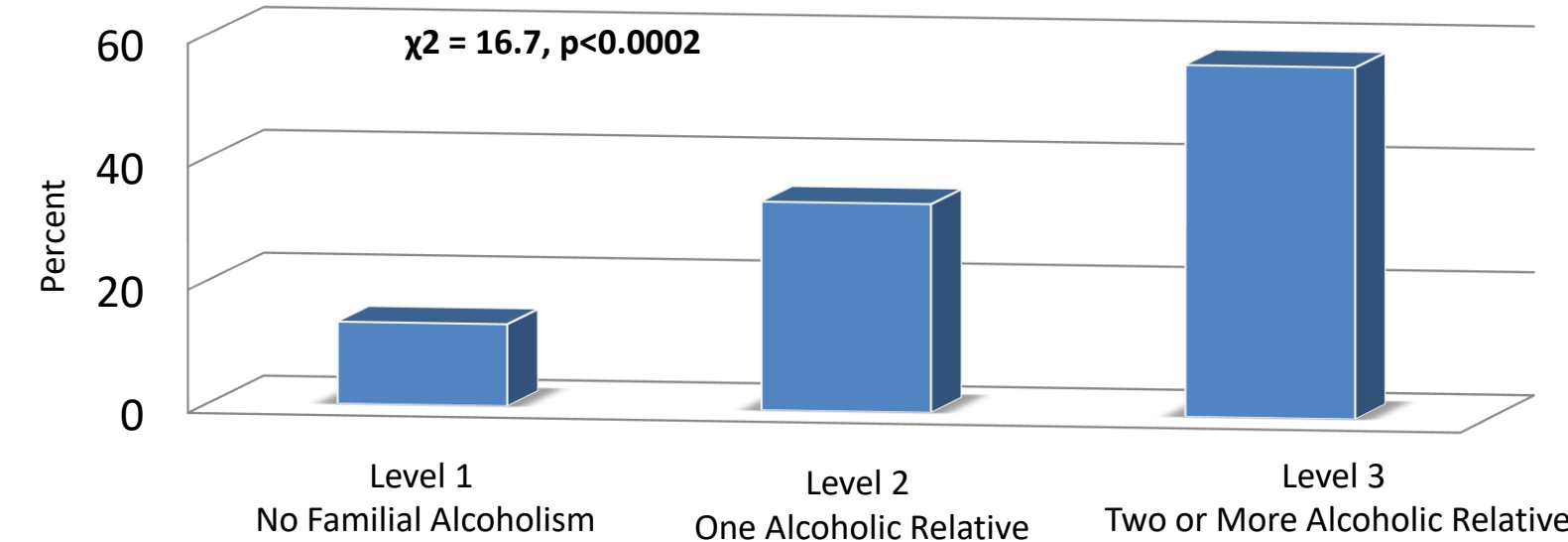
Among the 156 men who were examined, 11 had no information about their family history.

Social Demographic Characteristic by the Tri-Level Method

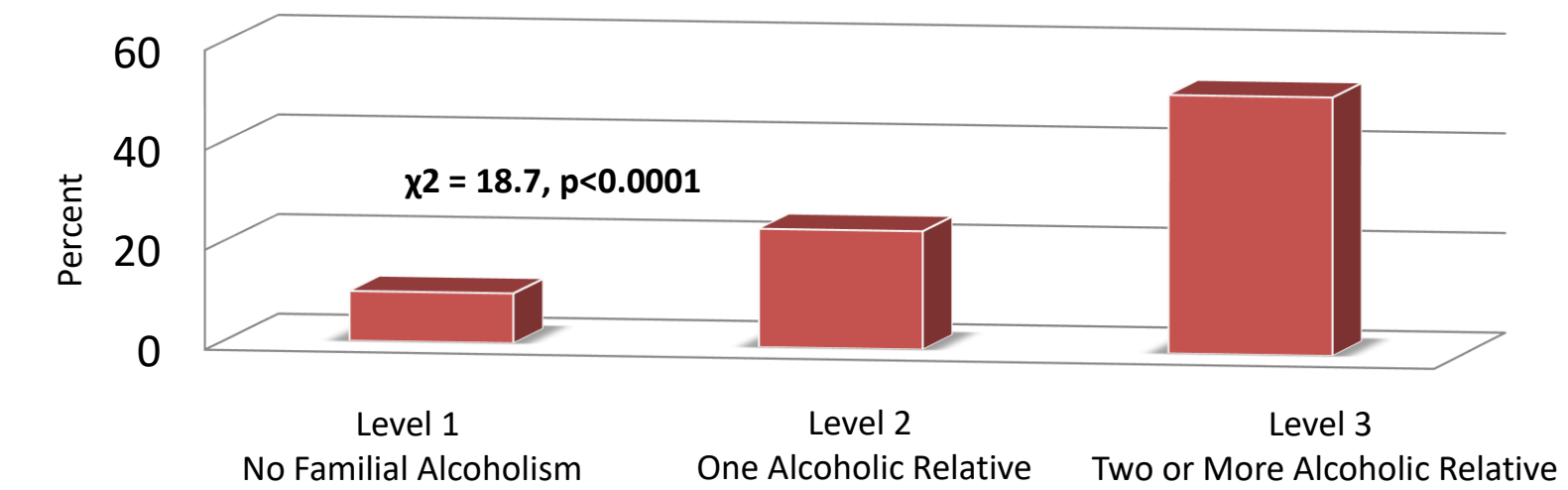
	Level 1: No Familial Alcoholism (n= 30)	Level 2: One Alcoholic Relative (n=59)	Level 3: Two or More Alcoholic Relative (n=56)	p
Age (x̄, SD)	53.4±0.72	53.1±0.93	53.2±0.78	NS
Current Occupation (%)				
Independent	21%	38%	42%	NS
Salaried	26%	47%	26%	
Skilled	35%	29%	35%	
Semi/Non-Skilled	15%	32%	54%	
Not Working	6%	41%	53%	
Marital Status (%)				
Married	24%	44%	31%	NS
Cohabited	14%	45%	41%	
Divorced/Separated/Widowed	20%	30%	50%	
Never Married	17%	39%	43%	
Unemployed (%)	17%	24%	40%	0.0512

RESULTS

Lifetime Alcohol Abuse/Dependence*

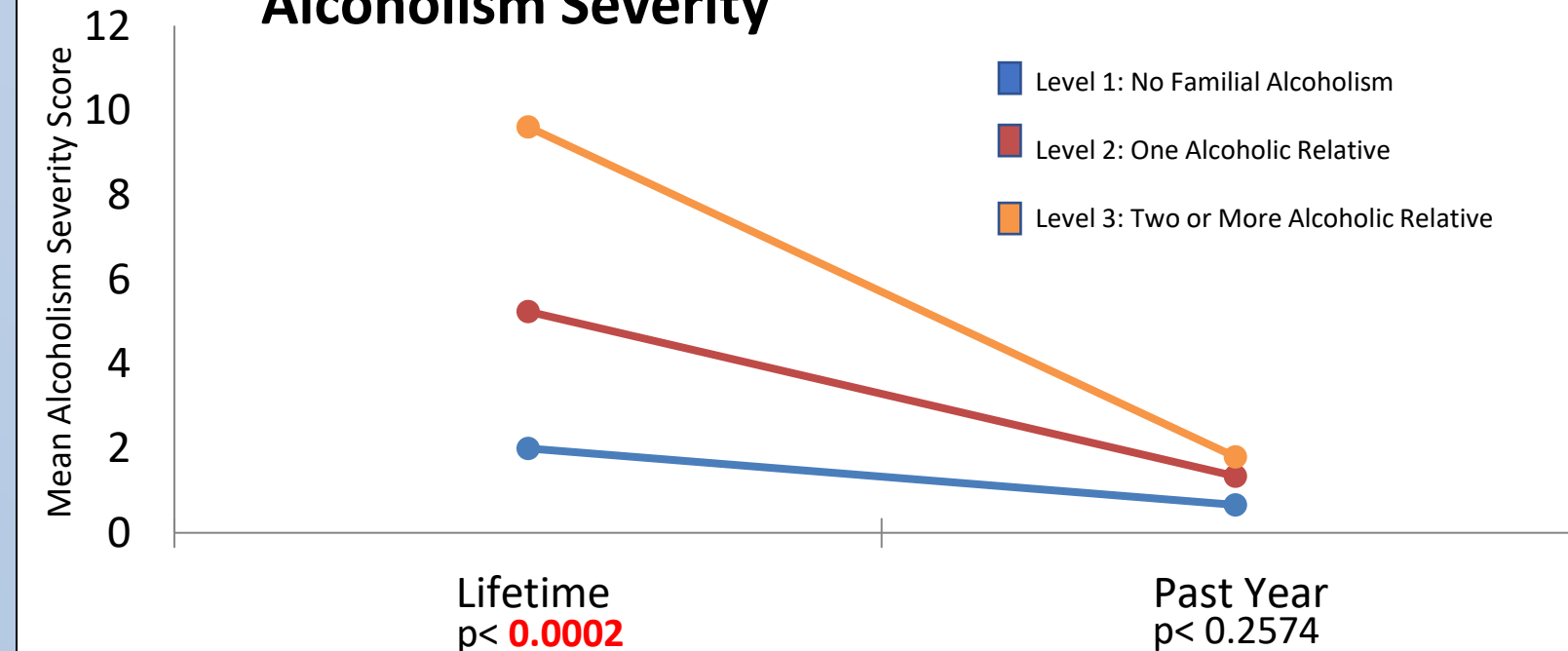


Lifetime Alcohol Dependence*



*Based upon the diagnosis of a senior psychiatrist.

Alcoholism Severity

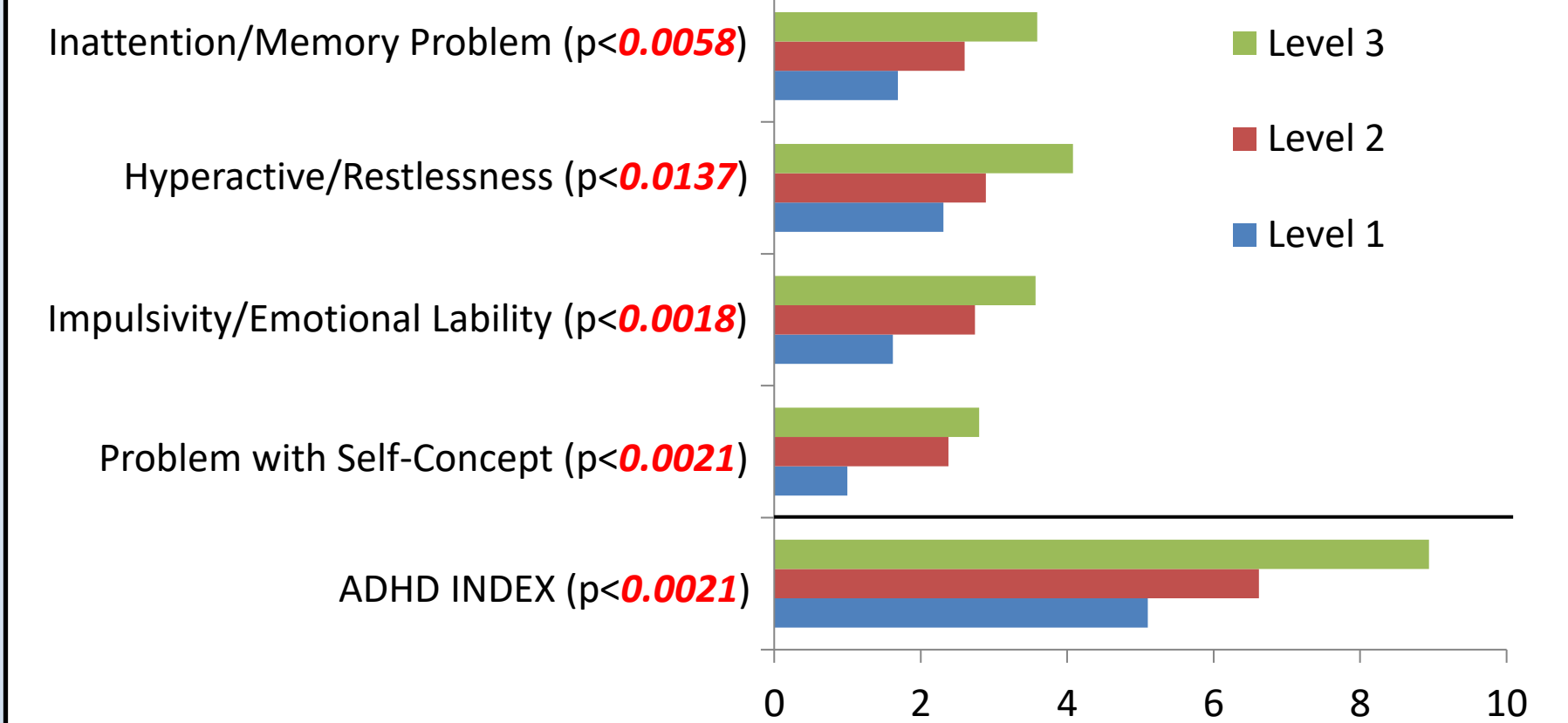


Mean lifetime and past year alcoholism severity based upon a 30-item scale derived from Psychiatric Diagnostic interview IV (PDI IV) according to the Tri-Level Method at age 50.

PDI-IV Positive Psychiatric Syndromes

	Level 1	Level 2	Level 3	p
Alcoholism	5.9%	35.3%	58.8%	0.0002
Drug Abuse	0.0%	20.0%	80.0%	0.0002
Depression	6.3%	37.5%	56.3%	0.1952
ADHD	7.7%	15.4%	76.9%	0.0129
Anti-Social Personality Disorder	0.0%	35.3%	64.7%	0.0243
TOTAL SYNDROMES (out of 18) X	0.2	0.8	1.5	0.0001

Conners' Adult ADHD Rating Scale (CAARS)



SF-36 v2 Health Survey

	Level 1	Level 2	Level 3	p
Physical Functioning	54.5	52.0	51.6	0.1456
Physical Role	55.8	52.1	50.7	0.0329
Bodily Pain	56.6	50.9	52.3	0.5487
General Health	58.5	51.7	52.2	0.0154
Vitality	59.1	55.0	56.1	0.0128
Social Functioning	61.3	54.2	51.7	0.0253
Role Emotional	56.1	52.1	51.1	0.1007
Mental Health	55.0	54.0	53.7	0.0025
Physical Component Summary	59.8	51.0	51.7	0.1252
Mental Component Summary	55.2	55.2	53.4	0.0215

CONCLUSION

The Tri-Level Method of defining familial alcoholism proved to be a highly efficient predictor of male alcoholism and its effects after 50 years.

Presence of multiple first degree alcoholic relatives is associated with:

- More severe alcoholic drinking
- Greater likelihood of receiving an alcoholism diagnosis
- Higher levels of impulsivity and restlessness
- Poorer social functioning

Tri-Level Method is a extremely valid, cost-effective, simple and easy to use approach to reliably identify Familial Alcoholism.

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