



Predictors of the Onset of Nicotine Dependence in Adolescents

Michael Raymond



• **Introduction**

About one in five young teens (aged 13 to 15) smoke worldwide. In the US, approximately 80,000-100,000 adolescents try cigarettes for the first time each day (Martin, 2002). Nicotine dependence can develop rapidly after smoking initiation (DiFranza et al., 2000; DiFranza et al., 2002) and has been associated with smoking maintenance and unsuccessful quit attempts in adulthood (Colby, Tiffany, Shiffman, & Niaura, 2000). Due to the adverse health consequences associated with smoking, identifying predictors of nicotine dependence onset in adolescents is a public health concern and priority.

• **Objectives**

- Report national prevalence of nicotine dependence among adolescents that have tried cigarettes within the past two years.
- Examine the relationship between nicotine dependence and sociodemographic/substance use variables among new smokers

• **Methods**

- Data was taken from the National Survey on Drug Use and Health (NSDUH) which included a representative sample of US adolescents and adults.
- The weighted screening response rate was 91% for the 2002-2005 years. In total, 271,978 respondents completed the 2002-2005 surveys.
- The final sample included adolescents aged 12 to 21 who had started smoking within the past two years (n=15101).

• **Measures**

- Socio demographic variables (gender, income, age, ethnicity/race)
- Smoking quantity and frequency within the past 30 days
- Nicotine dependence measured by the Nicotine Dependence Symptom Scale (NDSS)
 - Respondents were classified as nicotine dependent with a score of 2.75 or higher
- Lifetime use of illicit drugs and alcohol

• **Results**

- 5.6% of respondents were nicotine dependant.
- 84.8% of participants who smoked in the last 30 days smoked 5 or fewer cigarettes per day.
- 53.1% of participants who smoked in the last 30 days smoked 6 or more days in the past month.
- Chi-square analyses revealed that females, individuals with lower income levels, Whites and Native Americans, and individuals who use alcohol and illicit drug were more likely to be classifies as nicotine dependent.

• **Conclusion**

- Similar to prior research, Whites (Mei-Chen Hu, 2006), individuals with lower income levels (Barbeau, 2000), and females (Kandel et al., 1997) had higher rates of nicotine dependence. In the present study, nicotine dependence was associated with alcohol and illicit drug use (Henningfield, 1990) The present study extends prior research by examining previously identified risk factors for nicotine dependence in a sample of adolescent who initiated smoking within the past 2 years.

Sociodemographic Variables	Nicotine Dependent	Statistics χ ² , p value
Gender		2742.2, .0001
Female	5.9%	
Male	5.2%	
Income		33349.3, .0001
Less than 20,000	6.9%	
20,000 - 49,999	5.9%	
50,000-\$74,999	5.5%	
75,000 +	3.9%	
Ethnicity/Race		50105.5, .0001
White	6.6%	
Black	4.2%	
Native American	6.6%	
Non-Hispanic Native Hawaiian/other Pacific Islander	4.3%	
Hispanic	3.4%	
Other/More than one race	3.1%	
Asian	4.6%	
Ever used alcohol		26916.9, .0001
No	3.3%	
Yes	6.0%	
Ever used illicit drugs		48656.8, .0001
No	3.4%	
Yes	7.7%	