

Predictors of alcohol initiation among Hispanic adolescents in Puerto Rico

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Introduction:

Various social and psychological factors have been identified as significant correlates of alcohol use among adolescents. These factors have been classified in three broad domains:

- (a) **environmental**-e.g. substance use by peers & significant others (e.g. siblings, neighbors), family structure and relationships with parents, and school adaptation (Chilcoat & Anthony, 1996; Dormitzer et al., 2004; Gardner & Steinberg, 2005);
- (b) **behavioral** - theory of psychosocial risk (Jessor & Jessor, 1977); and
- (c) **emotional or mood disorder** (Fergusson & Horwood, 2003; Kandel & Chen, 2000).

Objective:

Examine the predictors of alcohol use initiation.

Sampling and Recruitment:

Participants: adolescents and his or her parents or caregivers

Recruited by outreach workers
Randomly selected households within close proximity to drug markets
Ages 12 to 15 years old (n = 466)*

*Subjects of 1st year follow-up and reported no alcohol use at baseline.

Measures:

Adolescent alcohol use. Adolescent alcohol use was measured by asking youth: "During the last year, how many times did you drink alcoholic beverages (wine, beer, rum, gin, "Breezers", or other liquors)?"

Adolescent substance access. Adolescent access to alcohol was measured by asking how easy it was for the youth to access alcoholic beverages (wine, beer, rum, gin, "Breezers", or other liquors).

Friends substance use. A list of 15 categories of psychoactive substances, alcohol and cigarettes was used to assess friends substance use. For each substance, adolescent reported if they have a friend who used during the last year.

Family and Neighbors substance use. Family alcohol and drug use was measured separately with the questions: How frequently did you see your family drinking alcoholic beverages? and How frequently did you see a family member in possession of or selling drugs?

Figure 1 shows the changes in alcohol use. The number of adolescents who started drinking was 18.7% at the first year follow-up.

Fig 1. Changes of Alcohol Use at 1 Year Follow-Up

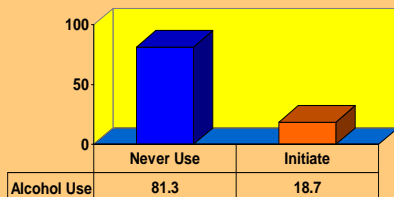


Table 1. Sociodemographic characteristics of the study sample (n=466)

Variables	N	%
Gender		
Male	227	48.7
Female	239	51.3
Age (years)		
12	115	24.7
13	148	31.8
14	130	27.9
15	73	15.7
Education status		
Out of school	1	0.2
Elemental	76	16.5
Intermediate	332	72.0
Secondary	52	11.3
Family Composition		
Single Parent		
No	211	45.3
Yes	255	54.7

Table 1 summarizes the demographic characteristics of the sample. The majority of adolescent subjects were 13 to 14 years old, slightly more males than females, living with a single parent, and attending intermediate school.

Table 3. Alcohol initiation by adolescent access and family, friends and neighbors substance use

Variables	Alcohol Initiation		
	n	%	P-value
Adolescent access Alcohol			
No	53	14.2	<0.001
Yes	34	36.2	
Cigarettes			
No	54	14.4	<0.001
Yes	33	36.3	
Drug			
No	68	16.7	0.012
Yes	19	31.7	
Family substance use Alcohol			
No	38	14.5	0.012
Yes	49	24.0	
Drug			
No	79	17.8	0.038
Yes	8	38.1	
Friend substance use Alcohol			
No	66	16.8	0.022
Yes	21	28.8	
Cigarettes			
No	76	17.4	0.012
Yes	11	37.9	
Drug			
No	79	17.8	0.038
Yes	8	38.1	
Neighbors substance use Alcohol			
No	22	11.2	<0.001
Yes	65	24.2	
Drug			
No	55	15.8	0.009
Yes	32	27.4	

Table 2. Alcohol initiation by sociodemographics (n=466)

Variables	n	Alcohol Initiation %	P-value
Overall	87	18.7	--
Sociodemographics			
Gender:			
Male	48	20.1	0.476
Female	39	17.2	
Age (years):			
12-13	32	12.2	<0.001
14-15	55	27.1	
Single parent:			
No	38	18.0	0.811
Yes	49	19.2	
School related			
Cut classes:			
No	49	14.2	<0.001
Yes	38	31.7	
Lower grades -C's or lower:			
No	67	17.7	0.146
Yes	19	25.3	
Involved in violence act:			
No	54	15.3	<0.001
Yes	33	29.2	
Sexually active:			
No	69	16.7	0.004
Yes	11	40.7	
Defiant Oppositional Disorder:			
No	74	17.2	0.006
Yes	13	37.1	

Table 3 All variables related to access to substance use, family, friend, and neighborhood characteristics were significantly related to alcohol use initiation.

Table 4 shows that females & oldest (14-15 years) were more likely to initiate alcohol use. That adolescents that cut classes and were involved in violent acts were 2 times more likely to initiate alcohol use. Those with oppositional defiant disorder were 3 times more likely to initiate alcohol use. Adolescents reporting access to cigarettes and who family members report using drugs were nearly 4 times more likely to initiate alcohol use. Adolescents who neighbors use alcohol were nearly 2 times more likely to initiate alcohol use. In contrast those who reporting access to drugs were less likely to initiate alcohol use.

Table 4. Results of the multiple logistic regressions

Variables (Reference)	Alcohol Initiation			
	OR	95% CI	P-value	
Sociodemographics				
Gender (Female)	Male	0.5	0.3-1.0	0.037
Age - years (12-13)	14-15	2.1	1.2-3.8	0.019
Single parent (No)	Yes	1.0	0.6-1.8	0.991
School related				
Cut classes (No)	Yes	2.3	1.3-4.2	0.007
Lower grades -C's or lower (No)	Yes	1.4	0.7-2.9	0.308
Behavior related				
Involve in violent act (No)	Yes	2.0	1.1-3.7	0.036
Sexually active (No)	Yes	1.5	0.6-4.2	0.421
Defiant Oppositional Disorder (No)	Yes	3.0	1.2-7.3	0.015
Adolescent substance access				
Alcohol (No)	Yes	1.6	0.6-4.2	0.369
Cigarettes (No)	Yes	3.5	1.2-9.9	0.020
Drugs (No)	Yes	0.3	0.1-0.9	0.037
Family substance use				
Alcohol (No)	Yes	1.0	0.5-1.9	0.959
Drugs (No)	Yes	3.7	1.2-11.4	0.022
Friends substance use				
Alcohol (No)	Yes	0.9	0.4-2.0	0.711
Cigarettes (No)	Yes	0.8	0.2-3.3	0.797
Drugs (No)	Yes	2.2	0.5-9.7	0.278
Neighbors substance use				
Alcohol (No)	Yes	2.3	1.1-4.6	0.020
Drugs (No)	Yes	0.8	0.4-1.5	0.481

Table 2. Overall, 87 (18.7%) adolescents who were never drinkers had a first drink of alcohol during the first year follow-up. Males reports a prevalence of 20.1% of alcohol initiation and females a 17.2%. Adolescents 14 to 15 years old (27.1% vs. 12.2%), those that cut classes (31.7% vs. 14.2%), and who reported involvement in violence (29.2% vs. 15.3%), sexual behavior (40.7% vs. 16.7%) and reported oppositional defiant disorder behavior (37.1% vs. 17.2%) were more likely to initiate alcohol use.

Conclusions:

Professionals in the education and health fields, especially primary care physicians, should be sensitized and made aware when considering the factors that place disadvantaged young adolescents at risk for alcohol use initiation. Public policies that make alcohol less accessible and making already existing policies related to the selling of alcohol to minors more difficult to ignore by owners of alcohol outlets are both critically needed.

Churches and other civic and recreational organizations also need to help adolescents in their disadvantaged communities stay resistant to alcohol use initiation so that the may be able to finish high school and continue their education in order to get out of poverty and move upward in the socioeconomic social structure.

