

Introduction: Despite a minimum legal drinking age of 18, many adolescents in Puerto Rico consume alcohol. Moreover, results from the USA 2002 National Survey on Drug Use and Health show that persons who initiated alcohol use before age 15 were more than five times as likely to report alcohol abuse/dependence than persons who first drank at age ≥ 21 . Recent studies also suggest that individual, family, school and community factors influence the experimentation and use of alcohol among adolescents. This study examines the factors that place adolescents in Puerto Rico, ages 13 to 15, at risk for alcohol use.

Methods: The sample for this study (n=550) was comprised of adolescents between the ages of 13 and 15 residing in poor neighborhoods. This sample was selected from census blocks surrounding identified copping areas (outdoor drug-selling areas). Parents and their offspring were interviewed.

Analysis: Descriptive and bivariate analyses were used to calculate the prevalence of alcohol use and the association with a selected number of variables. A multiple logistic regression model adjusted by parent's alcohol diagnoses and drug use, single mother household, mother's depressive symptomatology and adolescent's gender was performed.

Results: Overall, 21.3% of the adolescents between the ages of 13 and 15 had drunk alcohol. **Figure 1** shows an age-related increase of 21.4% in alcohol use from 13.8% of 13 years-old to 35.2% of 15 years old. A similar pattern was observed by gender but with no significant differences. (**Figure 2**)

Figure 2 Prevalence of Alcohol use by gender

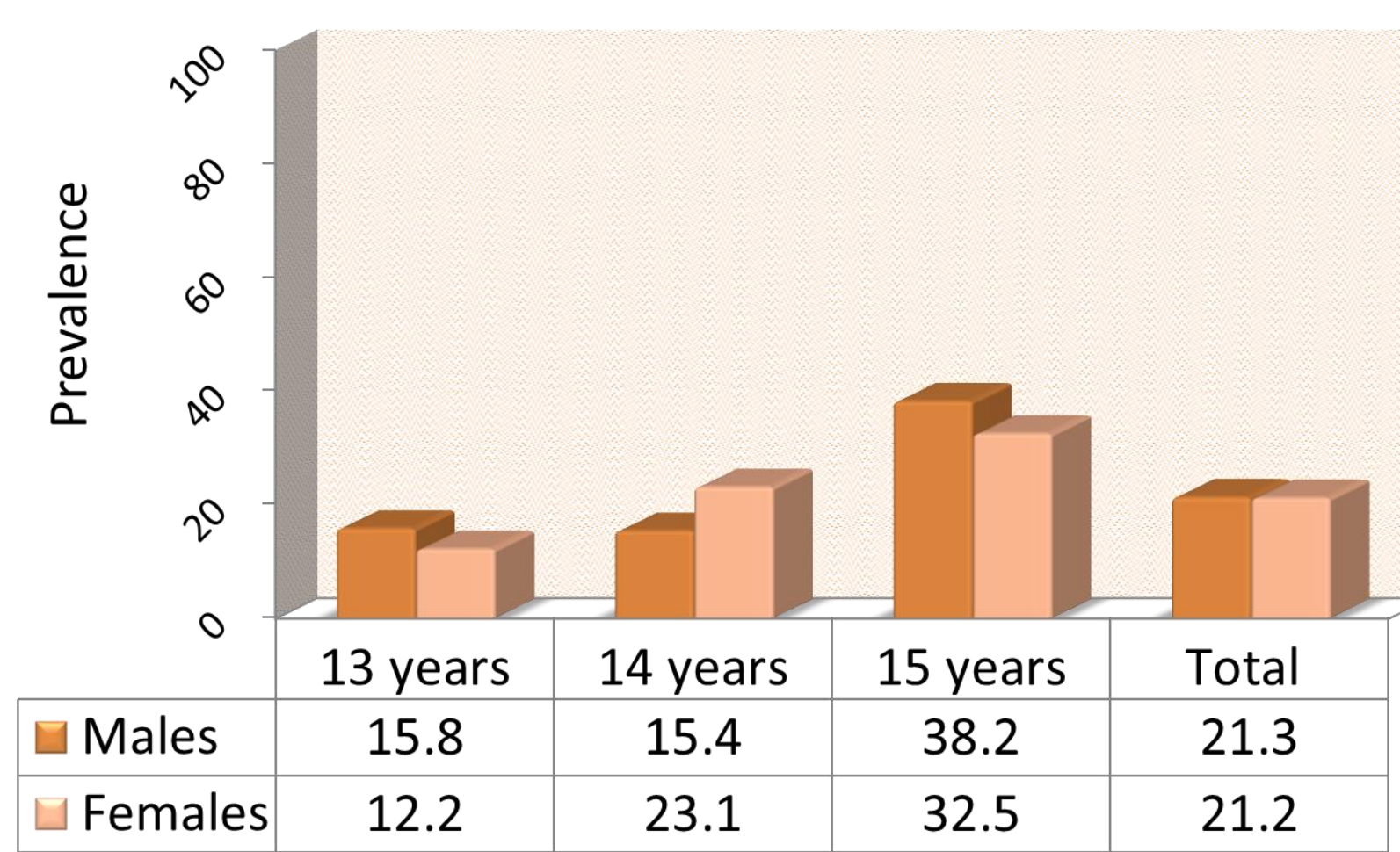


Table 1. Individuals, family, school and community factors related to alcohol use – Last Year

Factors	n	Percent
Individual		
Alcohol-access (yes)	150	27.3
Cigarettes access (yes)	129	23.5
Cigarettes use (yes)	10	1.8
Drug access (yes)	94	17.1
Depression - CIDI (case)	35	6.4
Suicide Ideation (yes)	33	6.2
Suicide Attempt (yes)	30	5.7
Conduct disorder (yes)	32	5.8
Oppositional Defiant Disorder (yes)	53	9.6
Violence (yes)	183	33.3
Look oldest (yes)	175	31.8
Premature Sex Behavior (yes)	75	14.3
Family		
Single parent (yes)	303	55.1
Alcohol abuse: Father (yes)	25	4.5
Family member drug use (yes)	43	7.8
Depression - CIDI (case)	106	19.3
School		
School: cut classes (yes)	210	38.2
Out of school (no)	13	2.4
Students using drugs (yes)	45	8.3
A lot of fights (yes)	280	51.9
Friends		
Cigarettes use (yes)	78	14.2
Drug use (yes)	57	10.4
Drug selling (yes)	37	6.7
Community		
Alcohol use: Neighbors (yes)	365	66.4
Drug use-sell: Neighbors (yes)	146	26.5

Table 1: From the individual factors related to alcohol use, access to alcohol and cigarettes, violence and looking older were the most prevalent. More than half of the sample living with the mother only, and nearly one-fifth of them reported depressive symptoms. 38% reported cutting classes and more than 50% reported a school ambiance with frequent fights and alcohol use by neighbors. Also, more than one-quart reported drug use/selling among neighbors.

Table 2 Percent of Alcohol use by Individual Factors – Last Year *p < .05; **p < .01; ***p < .001

Factors	13 years (n=210)			14 years (n=195)			15 years (n=145)			13-15 years (n=550)		
	Percent		p	Percent		p	Percent		p	Percent		p
Individual	No	Yes		No	Yes		No	Yes		No	Yes	
Alcohol-access	9.6	30.2	**	16.4	25.5		29.0	46.5	*	16.5	34.0	***
Cigarettes access	11.7	23.1		19.2	18.4		31.7	43.9		19.2	27.9	*
Cigarettes use	14.0	0.0		17.7	100.0	**	33.3	100.0	*	20.4	70.0	***
Drug access	11.5	28.6	*	19.6	15.6		30.6	50.0	*	19.1	31.9	**
Depression - CIDI (non-case vs. case)	14.1	9.1		17.0	46.2	*	35.1	36.4		20.6	31.4	
Suicide Ideation	13.4	28.6		14.9	81.8	***	31.3	75.0	*	18.8	57.6	***
Suicide Attempt	12.8	35.7	*	16.3	75.0	***	32.1	62.5	*	19.2	53.3	***
Conduct disorder	13.9	11.1		18.8	21.4		33.1	66.7		20.7	31.3	
Oppositional Defiant Disorder	10.6	40.9	***	18.2	28.6		32.0	58.8	*	18.9	43.4	***
Violence	8.1	27.9	***	16.5	23.5		28.6	46.3	*	16.1	31.7	***
Look oldest	9.2	25.9	**	18.9	19.0		29.7	44.4		17.6	29.1	**
Premature Sex Behavior	13.2	37.5		15.6	37.9	**	27.9	57.9	***	17.4	48.0	***

Table 3. Percent of Alcohol use by Family, School, Friends and Community Factors – Last Year *p < .05; **p < .01; ***p < .001

Factors	13 years (n=210)			14 years (n=195)			15 years (n=145)			13-15 years (n=550)		
	Percent		p	Percent		p	Percent		p	Percent		p
Family												
Single parent	10.6	16.0		20.8	17.2		30.3	39.2		19.8	22.4	
Alcohol abuse: Father	13.4	25.0		17.4	45.5	*	36.7	0.0		21.0	28.0	
Family member drug use	12.9	25.0		17.0	46.2	*	32.1	64.3	*	19.3	44.2	***
Depression - CIDI (non-case vs. case)	11.6	23.7		18.8	19.5		38.1	22.2		21.2	21.7	
School												
School: cut classes	9.2	25.9	**	11.5	31.5	***	19.7	48.1	***	12.1	36.2	***
Out of school	0.0	13.9		83.3	16.9	***	83.3	33.1	*	19.9	76.9	***
Students using drugs	11.7	46.2	**	18.2	13.3		30.3	52.9		18.6	37.8	**
A lot of fights	9.5	18.3		10.5	23.8	*	25.0	40.8	*	13.9	26.1	***
Friends												
Cigarettes use	11.7	46.2	**	16.4	33.3	*	23.6	71.4	***	16.1	52.6	***
Drug use	12.1	41.7	*	17.7	30.0		26.7	76.0	***	17.6	52.6	***
Drug selling	12.9	33.3		18.7	23.1		30.0	80.0	***	19.3	48.6	***
Community												
Alcohol use: Neighbors	8.9	16.8		12.1	21.9		29.2	38.1		15.1	24.4	**
Drug use-sell: Neighbors	11.1	22.9	*	20.3	15.8		35.6	34.1		20.5	23.3	

Table 4 Factors related to alcohol use by age: logistic results Note: OR= odds ratio; CI= confidence interval. *p < .05; **p < .01; ***p < .001

Factors	13 years			14 years			15 years			13-15 years		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Individual												
Alcohol-access (yes)	3.7	1.4- 9.9	**							1.7	1.0- 3.0	*
Cigarettes access (yes)							2.7	1.0- 7.0	*			
Suicide Ideation (yes)				51.8	5.8- 462.6	***				4.6	1.9- 11.5	
Oppositional Defiant Disorder (yes)	3.7	1.1- 13.1	*				3.6	1.0- 13.1	*	2.6	1.3- 5.2	**
Violence (yes)	6.1	2.1- 17.4	***									
Look oldest (yes)	6.5	2.3- 18.6	***									
Premature Sex Behavior (yes)										2.4	1.3- 4.5	**
Family												
Single parent (yes)	3.0	1.0- 8.4	*									
Alcohol abuse: Father (yes)				5.3	1.1- 26.4	*						
Depression - CIDI (case)							0.3	0.1 1.0	*			
School												
School: cut classes (yes)							3.4	1.3- 8.9	**	2.6	1.5- 4.4	***
Students using drugs (yes)	5.3	1.2- 24.0	*									
Friends												
Cigarettes use (yes)				3.9	1.4- 10.6	**	9.0	3.3- 24.8	***	4.3	2.3- 7.9	***

Table 2: In presence of five or more individual factors, adolescents show a high prevalence of alcohol use.

The highest reported individual factors by age are as follows: age 13, oppositional defiant disorder and violence; age 14, suicide ideation and attempt; and age 15, premature sex.

Table 3: Father alcohol use was a significant family factor for adolescents age 14. Moreover, family member drug use was a significant factor for adolescents ages 14 and 15. Cutting class was a risk for all ages.

Also, other students using drug (age 13) and attending a school with frequent fights (ages 14 and 15) were reported as risk factors. Friends' cigarette use is a risk factor across all ages. However, friend's drugs use was a significant risk for ages 13 and 15. Drug use and selling drugs in the neighborhood were only significant for age 13 and alcohol use for the general sample.

Table 4: Violence, looking older, other students using drugs, and alcohol access were the main factors related to alcohol use for adolescents age 13. For age 14, suicide ideation, father alcohol abuse and friends' cigarette use were the factors related to alcohol use. Cigarette access and cigarette use by friends, depressive symptoms and cutting classes were the factor related to alcohol use among adolescents age 15.

Conclusion: Similarly to other studies, alcohol use continues to be highly prevalent among Hispanic adolescents residing in Puerto Rico. There is a need to develop prevention programs and specific proactive initiatives to address alcohol use and progression among adolescents.

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The study was funded by NIDA Grant 5R24DA013335 and NCRRCMI G12RR003035

