

# DETERMINANTS OF TOBACCO USE AMONG ADOLESCENTS: A SOCIAL ECOLOGIC PERSPECTIVE

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## BACKGROUND

Tobacco is the leading cause of preventable morbidity and mortality worldwide. In the United States, between 2005–2009, cigarette smoking and exposure to tobacco smoke resulted in an estimated 480,000 premature deaths, and \$300 billion dollars in annual productivity losses. (CDC)<sup>1</sup>. Studies have found that adults that smoke typically began smoking as adolescents, hence, adolescent tobacco use is a public health concern because of its long term effects and consequences.

Compared to other ethnic groups, Hispanic/Latino(a) adolescents are at a higher risk for substance use. It has been well documented that Hispanic 8th and 10th graders report more alcohol, cigarette, and illicit drug use (with the exception of amphetamines) than their non-Hispanic White and African American counterparts. Several sociocultural and individual factors have been implicated as determinants of Hispanic adolescent tobacco use.

## PURPOSE

So far, very many studies have focused significantly on the intrapersonal determinants adolescent tobacco use. The purpose of this study is to extend and build upon previous work by exploring not just the intrapersonal level determinants but additionally the interpersonal processes, social community factors, and community determinants associated with adolescent tobacco use.

## DATA

Data from this study was from Project RED. Project RED (Reteniendo y Entendiendo Diversidad para Salud) is a longitudinal study of acculturation patterns and substance use among Hispanic/Latino adolescents in Southern California.

The respondents in this study were 9<sup>th</sup> grade students attending seven high schools in the Los Angeles area. Because this is a study of Hispanic adolescents, schools were approached and invited to participate if they contained at least 70% Hispanic students, as indicated by data from the California Board of Education. Across the seven schools, 3,218 students were invited to participate. Of those, 2,420 (75%) provided parental consent and student assent. Of those, 2,225 (92%) completed the survey.

## METHOD

Using SPSS 24, we cleaned, coded, recoded, and computed variables used in the analysis. We conducted descriptive analyses, bivariate analyses and a block model logistic regression analyses to examine the magnitude of the effect of the different levels of determinants on adolescent tobacco use.

## RESULTS

Table 1: Descriptive statistics of the sample population

Variables	%
Age	
Between 12 and 15 years old	69.8
Between 16 and 18 years old	7.8
Gender	
Male	36.5
Female	40.6
Ethnicity	
Hispanic	52.1
Non Hispanic	31.2
Educational performance	
A & B's	28.4
B's & C's	32.9
C's & D's	14.8
D's & F's	7.7
Not in school	0.4
Ever smoked(life time)	
Yes	58.1
No	27.1
Smoked within last 30 days	
0 days	78.4
1-30 days	6.7
Social Economic Status(#of rooms/ # of people) (mean, SD)	0.68, 0.30
Parents who smoke	
Yes	26.8
No	58.4
Siblings who smoke	
Yes	13.4
No	71.7
Perception of your community, how many people do you think smoke (n=100)?	
None of them	4.6
About 10	11.2
About 20	9.1
About 30	10.3
About 40	10.6
About 50	13.1
About 60	6.5
About 70	6.1
About 80	4.7
About 90	2.9
About 100	5.8
How many of your best friends smoke (n=5)?	
0	38.8
1	12.8
2	8.4
3	5.6
4	3.6
5	2.3
How your best friend feel about you smoking?	
Strongly Disapprove	53.4
Disapprove	18.7
Approve	3.6
Strongly Approve	0.8
Do you feel safe in your school? (Mean, SD)	2.58, 0.53
1= Strongly Disagree	
2=Disagree	
3= Agree	
4= Strongly Agree	
N= 3194	

Table 3: Results of logistic regression showing the extent of the effect of variables on individuals, and whether each variable encouraged them to smoke.

Variables	Intra Odds Ratio	95% Confidence Interval	Inter Odds Ratio	95% Confidence Interval	Institution Odds Ratio	95% Confidence Interval
Age	1.52	0.881, 2.606	1.59	0.87, 2.92	1.597	0.87,2.92
Gender	0.92	0.636, 1.315	0.733	0.48, 1.11	0.729	0.48,1.11
Ethnicity	1.06	0.732, 1.545	0.9	0.60, 1.36	0.896	0.59,1.36
Educational Performance						
A & B's						
B's & C's	2.139**	1.262, 3.624	1.53	0.87, 2.68	1.509	0.86, 2.65
C's & D's	4.311***	2.053, 7.649	2.49**	1.38, 4.51	2.449**	1.35, 4.44
D's & F's	8.543***	4.733, 15.420	3.96***	2.05, 7.65	3.863***	1.99, 7.50
Not in school	0.000	0.000, ...	0.000	0.00, ...	0.000	0.00, ...
Social Economic Status (#of rooms/ # of people)	1.483	0.842, 2.613	1.355	0.73, 2.5	1.334	0.72, 2.47
Parents who smoke			0.50**	0.34, 0.75	0.51**	0.34, 0.76
Siblings who smoke			0.47**	0.30, 0.73	0.47**	0.30, 0.73
Perception of your community, how many people do you think smokes (n=100)?						
How many of your best friends do smoke (n=5)?			1.76***	1.56, 2.00	1.76***	1.56, 2.00
How your best friends feel about you smoking? (Strongly disapprove)						
Disapprove			3.57	0.41, 31.12	3.630	0.42, 31.42
Approve			7.58	0.87, 66.00	7.627	0.88, 66.00
Strongly Approve			11.66*	1.28, 106.38	11.624*	1.28, 105.35
Do you feel safe in your school?					0.90	0.61, 1.31

Adjusted R  
\* p<0.05  
\*\* p<0.01  
\*\*\* p<0.001

Table 2: Results showing univariate associations between different determinants and tobacco use among study participants

Bivariate correlation (smoking tobacco)	
Age	0.029*
Gender	0.023*
Ethnicity	0.002**
Educational performance	0.179
Generation in the US	0.039*
Ever smoked (life time)	0.422
Smoked within last 30 days	0.326
Social Economic Status(#of rooms/ # of people)	0.025*
Parents who smoke	0.124
Siblings who smoke	0.160
Perception of your community, how many people do you think smokes (n=100)?	0.096
How many of your best friends smoke (n=5)?	0.326
How your best friend feel about you smoking?	0.192
Do you feel safe in your school?	***-0.056
Adjusted R	
* p<0.05	
** p<0.01	
*** p<0.001	



## CONCLUSIONS

- In conclusion, adolescents are at risk population who are in need for more, better, and new interventions that focus on them and their friends to prevent them from smoking tobacco.
- The parents have a great responsibility in teaching their kids what are the cons of smoking tobacco. Also, parents are encouraged to know their children's friends and how they are effecting their children behavior.
- Policy intervention should focuses more on the Inter factors. Because it has the most effect on adolescents health behavior.
- Adolescents should reevaluate their relationships with their friend and make sure they choose those who will keep them healthy and happy as close friends.
- Finally, schools should have workshops, presentations, flyers, and announcements on the school social media outlets to make sure that their young students know the facts about the dangers of smoking tobacco.

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- Picture is obtained from an open source outlet. No citation required.