The association between smoking and unhealthy behaviors among a national sample of Mexican-American adolescents.

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Resumen: Examines the relationship between smoking and participation in unhealthy behaviors among Mexican-American adolescents through a secondary analysis of national data. played by smoking in premature death of Americans; Methodology used in the study; collection and analysis.

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THE ASSOCIATION BETWEEN SMOKING AND UNHEALTHY BEHAVIORS AMONG NATIONAL SAMPLE OF MEXICAN-AMERICAN ADOLESCENTS

ABSTRACT: This study examined the relationship between smoking and participation in unhealthy behaviors among Mexican-American adolescents through a secondary analysis of national data. Mexican-American adolescents (N=58 ages 10 through 18 years who were interviewed as part of the 1993 Teenage Attitudes and Practices Survey (TAPS II were selected for analysis. Data collected included smoking status of the adolescent and participation in certain unhea behaviors. Among girls in the study, smokers were more likely to not wear a seat belt, be involved in physical fighting, be involved in organized sports, perform poorly in school, say they like to do risky things, and ride in a car with a drunk high driver. For boys, smoking was significantly associated with liking to do risky things, fighting, not attending church, poor academic performance. These results suggest that Mexican-American adolescents who smoke may be at higher for engaging in behaviors that could compromise their health and safety, and for not being involved in activities that m exert a protective influence. (J Sch Health. 1998;68(9):376-380)

Cigarette smoking plays a direct role in the premature deaths of almost 500,000 Americans each year.(n1) Approxima 90% of tobacco use initiation occurs among adolescents,(n2) with more than 3,000 initiating this habit each day.(n3) Recent reports of smoking rates for adolescents indicate that 34.8% are current users.(n4) In response to this public h crisis, Healthy People 2000: Health Promotion and Disease Prevention Objectives included tobacco use as one of its

priority areas,(n5) specifically calling for reductions in initiation rates among adolescents.

Nearly 22 million people in the United States are of Latino background, with population projections indicating that Latin will be the largest minority group in the country by the year 2010.(n6) Currently, Mexican-Americans comprise 61% of total Latino population.(n6) According to the 1995 Youth Risk Behavior Survey, Latino youth are smoking at rates simi their White peers (34% vs. 38.3%, respectively), while national norms specifically for Mexican-American youth have n been established.(n7) One report found that Latino eighth graders were more likely to be current users of cigarettes th their White or African-American peers.(n8) An aggressive marketing scheme by the tobacco industry targeting Latino communities may be contributing to the smoking problem within this population.(n9) The youthfulness and rapid growt the Latino and Mexican-American population increase the need to accelerate prevention efforts to stave off high rates disease associated with chronic cigarette smoking.

Most adolescent morbidity and mortality can be attributed to certain lifestyles and social environments that involve or promote health risks.(n10) Within an individuals' lifestyle are the health-promoting and health-compromising behaviors are patterned features. Various definitions exist for the concept of lifestyle. As put forth by Sobel,(n11) lifestyle is essentially behavioral. The lifestyle concept has spawned ample research as the search is made for evidence of "clustering" of behaviors. Evidence has been provided for a clustering of health-promoting behavior such as physical exams, dental exams, adequate sleep, seat belt use, brushing of teeth, and regularity of meals.(n12,n13) Conversely, health-compromising behaviors have been found to co-occur in a manner consistent with the behavioral definition of lifestyle.(n14-n17) Cigarette smoking has been found to coexist with unhealthy lifestyle behaviors within the same individual. (n18,n19) One theoretical explanation for this apparent clustering of behaviors is offered by Jessor(n20) as "proneness to problem behavior." Evidence for such a clustering suggests that there may be a common, underlying fa that motivates an individual to partake in such behaviors.

This study examined the possibility that cigarette smoking is associated with participation in certain unhealthy lifestyle behaviors. The sample consisted of 580 Mexican-American adolescents who participated in a national survey. In congruence with studies focusing on majority populations, smokers are more likely to participate in unhealthy behavio compared with nonsmokers. Focusing attention on this understudied and rapidly expanding population can contribute the knowledge base in minority adolescent health research.

METHODS

Subjects

For purposes of this study, all subjects who indicated they were of Mexican-American or Mexican-Mexican backgroun = 580), and were between the ages of 10 and 18 years, and took part in the 1993 Teenage Attitudes and Practices Su II (TAPS II), were included in this analysis. TAPS I and TAPS II were conducted by the National Center for Health Statistics, the National Cancer Institute, and the Office on Smoking and Health as part of the National Health Interview Survey conducted during the final two quarters of 1988 and the first two quarters of 1989. TAPS II included 9,135 teen agers surveyed for TAPS I, in addition to 5,590 new subjects. The sample was representative of the civilian, noninstitutionalized population of the United States.(n21)

Data Collection and Analysis

In each TAPS II sample component, all persons eligible in a household were selected for participation. Computer Assi Telephone Interviewing (CATI) served as the principal means of data collection. Of the 9,135 cases fielded in the follo component, 87% (7,960) responded and for the 5,590 new TAPS II persons, (89%) 4,992 responded.

Smokers were dichotomized into two groups: nonsmokers were those adolescents not participating in smoking behavi any kind; smokers were those who currently smoked (experimenters, light smokers, heavy smokers). The behaviors chosen for analysis included seat belt use, physical fighting, riding in a car with a drunk or high driver, school performa participation in organized sports, and church attendance. Subjects also were asked if they enjoyed doing risky things.

Subjects who responded that they rarely or never used a seat belt, engaged in two or more physical fights during the p year, and had ever ridden in a car with a drunk or high driver were categorized as participating in these behaviors. Performing below average in school (vs. average or above average performance), rarely or never attending church (vs sometimes or often attending church), and not participating in organized sports were considered unhealthy behaviors.

Odds ratios (OR) and 95% confidence intervals (CIs) were calculated to determine if an association existed between participation in unhealthy behaviors and smoking. Odds ratios are the probability of an individual being a smoker if exp to a risk factor (participation in an unhealthy behavior), versus those not exposed to the risk.(n22)

RESULTS

This sample consisted of 580 Mexican-American adolescents, of which 282 were girls and 298 were boys. The averag age for girls was 1.3.92 years and 13.96 for boys. Smoking rates for the overall sample were 32%. Rates by gender w 29% (81/282) for girls and 35% (105/298) for boys.

Frequency of participation in unhealthy behaviors by smoking status are presented in Table 1. A substantial difference existed between smokers and nonsmokers with regard to most variables of interest. Based on these data, smokers of genders appear to participate in unhealthy behaviors more frequently than do nonsmokers. The 95% confidence interv for the odds ratios presented in Table 2 indicate that smokers were more likely to report liking to do risky things, to not seat belts, to ride in a car with a drunk or high driver, to have been involved in physical fighting, to not attend church, a perform poorly in school. Boys who smoked were 2.6 times more likely to report that they liked to do risky things as compared with nonsmokers. For girls, the association was even stronger (OR 4.1). Physical fighting, church attendanc and school performance were significantly associated with smoking status among boys, whereas all the behaviors, wit exception of church attendance, were significantly associated with smoking among girls. A notable difference occurred between girls and boys with regard to having ridden in a car with a drunk or high driver. While no significant difference existed between smoking and nonsmoking boys, girls who smoked were 6.4 times more likely to report this behavior. Smoking status and school performance were strongly associated, with boys being 5.4 times and girls being 12 times likely to perform poorly if they smoked.

DISCUSSION

Prevalence of cigarette use among Mexican-American adolescents in this study (32%) correspond to overall smoking for Hispanic adolescents from the Youth Risk Behavior Survey (YRBS).(n7) As is the case with White adolescents, the does not seem to be a pronounced difference in smoking rates between boys and girls. The current study found that 3 of boys (vs. 34.9% from YRBS) and 29% of girls (vs. 32.9% from YRBS)(n7) were smokers. It should be noted that Mexican-Americans were included within the overall "Hispanic" category in the YRBS, while this study analyzed this subgroup separately. It appears that Mexican-American adolescents smoking rates are similar to the overall Latino adolescent population. There have been attempts to establish smoking rates within the Mexican-American population. However, few large-scale studies have examined adolescents. The Hispanic Health and Nutrition Examination Survey reported that of all Latino groups, Mexican-American males have the highest rates of cigarette smoking (42.5%) and females the lowest (23.8%)(n23) Latinos tend to initiate smoking at a later age as compared with other ethnic groups,(which has important implications for prevention programs.

Poor academic achievement and dropout from school tend to be higher among students attending schools that are homogeneously populated, have large class sizes, and high pupil to teacher ratios, which are descriptors for most urb public schools in the United States.(n24) The fact that most Mexican-American adolescents reside in urban areas and attend schools which may be characterized by these factors places them at risk for school failure. This study found a s relationship between smoking and poor school performance for both boys and girls. Poor academic performance shou viewed as a possible precursor to dropout. According to Dryfoos,(n24) poor academic achievement can be both an antecedent as well as a consequence of other kinds of unhealthy behaviors.

Girls in this study who smoked were more likely to not participate in organized sports, while boys who smoked were le

likely to attend church. The overall community of the adolescent is made up various environmental influences on beha including membership in religious and other organized youth groups. In their extension of problem-behavior theory, Donovan et al(n12) suggest that greater conventionality (as determined by an individual's church attendance, involvem in school activities, and other behaviors that are socially approved and deemed appropriate for adolescents) is positive associated with less engagement in problem behaviors, including cigarette smoking.(n25) Using as their dependent variable an assessment instrument of 30-day use of tobacco, alcohol, and other drugs among a sample of 4,000 Mexi American and Mexican adolescents, researchers examined the influence of factors including involvement in sports an religious activities.(n26) Problem substance use was found to be significantly associated with lack of religious activity greater athletic activity.

The current findings among the boys of no significant association between smoking and sports participation support th findings. One explanation is that there may be a sanctioning effect within the sports environment for involvement in unhealthy behaviors, similar to what occurs in other peer-oriented adolescent activities. Research has shown peer influence to be the strongest predictor of smoking behavior among Latinos.(n27) The more traditional and adult-led activities associated with church involvement may exert a stronger protective effect against smoking and other unheal behaviors.

Among girls in this sample, a significant association existed between smoking and failure to use safety belts, and smo and riding in a car with a drunk or high driver. A large-scale study examining the relationship between seat belt use, drinking and driving, and smoking among US adults reported that these behaviors tend to cluster.(n28) A 1984-1985 national survey of Canadian adolescents found that cigarette smokers were less likely to use safety belts.(n29) Donov al(n12) included safety belt use as an independent contributor of conventionality-unconventionality to predict an adolescents' likelihood of engaging in other problem behaviors. Hawkins(n30) utilized canonical correlation, which alo with other variables, included cigarette smoking as a health compromising behavior, and seat belt use as a health promoting behavior. Separate analysis for boys and girls found similar results: the significant canonical variates includ smoking and seat belt use.

While the relationship between smoking and riding in a car with a drunk or high driver has not been clearly established recent study among high school students showed that 46% had at some point done so, thus highlighting the extent of problem.(n31) Gerrard et al(n32) assessed adolescent reckless driving, use of alcohol, and cigarette smoking along w associated cognitions about these behaviors in a three-year longitudinal study. They concluded that as adolescents increase their participation in risk behaviors, a decrease occurs in the influence of concerns about health and safety. Therefore, it stands to reason that an adolescent who smokes may be more apt to make poor decisions, such as to rid a car with an impaired driver. The results of a recent study conducted with Greek adolescents found that smokers wer times more likely to do so.(n33)

The relationship between physical fighting and cigarette smoking has been established among adolescents. A recent found daily smoking to be related to disruptive behavior disorders, including physical fighting.(n34) While the study did focus on Latinos, ethnicity, gender, and socioeconomic status served as control variables. Escobedo et al,(n35) using national sample of Latino adolescents, found that smokers were 1.4 times more likely to have been involved in physica fighting compared with nonsmokers. The findings in this study suggest that this behavior may be even more strongly associated with smoking among Mexican-American adolescents (OR 3.4 for boys, 3.7 for girls).

By revealing an association between smoking and unhealthy behaviors, the present study provided further evidence fo co-occurrence of unhealthy behaviors among adolescents. Importantly, by focusing on Mexican-American adolescents has been shown that this phenomenon is not confined to nonminority youth. More research is needed to identify the fa that exist in the personality and environment of the adolescent who engages in unhealthy behaviors, especially among minority youth.

The strengths of this study include its use of a national sample that included out-of-school youth large enough to exam for gender differences, and its focus on Mexican-Americans. While the findings are useful and important, they must be considered in light of the inherent limitations. The cross-sectional design of this study only allowed for a snapshot of information, unquestionably a limitation which can only be remedied with a prospective approach. The responses were based on self-report, making it possible for subject bias to contaminate the results. A multivariate analysis, accounting

demographic factors such as education, age, income, and geographic residence would strengthen the findings by eliminating the possibility of confounding effects. While the number of subjects of Mexican-American background was sizable, the numbers for other Latino subgroups ware too low to allow for analysis and comparisons. Thankfully, resea in the area of minority health has steered clear of lumping all Latinos into one category and making generalizations tha not supported by the methodology used. With the recognition of the need for this type of research, sampling strategies have included oversampling Latinos. While not possible in the present analysis, future studies should attempt to exam the relationship between smoking and unhealthy behaviors in various Latino groups to gain a better perspective on the similarities and differences that may exist.

CONCLUSION

As researchers continue to focus on minority adolescents, it becomes clearer that there is a common culture experien by all youth in this country that may influence health behavior and lifestyle decisions. Mexican-American adolescents appear to be at risk for participating in unhealthy behaviors on par with the majority adolescent population. It is importa that efforts be made on the part of involved professionals to better understand the special needs and cultural differenc that may influence the identification of at-risk individuals or the success of prevention efforts. Health educators, schoo personnel, and counselors can apply the findings of this study as they design and implement community and school-b programs. If an adolescent is a smoker, it may serve as a warning signal of the presence of other unhealthy behaviors Thus a smoker is not only compromising his or her health through the act of smoking, the individual may be involved i other behaviors or making decisions, out of line with sound health.

Table 1 Frequency of Participation in Problem Behaviors by Smoking Status

Legend for Chart:

A - Indicator
B - Boys Smokers n = 81 %
C - Boys Nonsmokers n = 199 %
D - Girls Smokers n = 105 %
E - Girls Smokers n = 192 %

A	B	C	D	E
Like to do risky things				
Yes	56	23	66	43
No	44	77	34	57
Seat belt us				
No	44	58	59	51
Yes	56	42	41	49
Rode in car with drunk or high driver				
Yes	24	5	16	9
No	76	95	84	91
Physical fighting				
Yes	28	10	58	29

No	72	90	42	71
Church attendance				
No	38	27	46	31
Yes	62	73	54	69
Participation in organized sports				
No	61	47	46	38
Yes	39	53	54	62
School performance				
Poor	11	1	17	4
Good	89	99	83	96

Table 2 Odds Ratios and 95% Confidence Intervals (CI) for Smokers According Problem Behaviors

Legend for Chart:

A - Unhealthy Behavior
B - All Subjects OR
C - All Subjects 95%CI
D - Boys OR
E - Boys 95%CI
F - Girls OR
G - Girls 95%CI

A			B	C
	D	E	F	G
Like to do risky things				
Yes vs. No			3.0	2.0, 4.4[*]
	2.6	1.6, 4.3[*]	4.1	2.4, 7.2[*]
Seat belt use				
Yes vs. No			1.6	1.1, 2.3[*]
	1.4	.9, 2.2	1.8	1.1, 3.0[*]
Rode in car with drunk or high driver				
Yes vs. No			2.7	1.5, 4.8[*]
	2.0	1.0, 4.1	6.4	2.7, 14.8[*]
Physical fighting				
Yes vs. No			3.0	2.0, 4.6[*]

	3.4	2.0, 5.5[*]	3.7	1.9, 7.3[*]
Church attendance				
No vs. Yes			1.8	1.2, 2.7[*]
	1.9	1.2, 3.1[*]	1.7	1.0, 2.9
School performance				
Poor vs. Good			6.5	2.8, 15.2[*]
	5.4	22, 13.4[*]	12	2.5, 57.2[*]
Organized sports participation				
No vs. Yes			1.3	.9, 1.9
	1.4	.9, 2.2	1.7	1.1, 3.0[*]

[*] p<.05

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Inicio de página

Atrás
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