RUNNING HEAD: SMOKING AMONG ASIAN-AMERICAN SUBGROUPS

Effects of Acculturation and Social Norms on Adolescent Smoking among Asian-American Subgroups

Abstract

This study provides new information about how acculturation and perceived social norms affect adolescents smoking among four Asian-American subgroups. Results showed differences in smoking prevalence rates across subgroups, with Koreans having the highest rates of smoking, while Chinese having the lowest rates. In contrast to the large gender disparity in the ancestral countries, smoking rates were equal for Asian-American boys and girls. Acculturation was significantly associated with an increased risk for lifetime smoking for Asian-American girls, but not for boys. Perceived social norms regarding peer smoking were significantly associated with smoking behaviors for both genders and for all subgroups.

Key Words. Adolescent smoking, Asian-American subgroup, acculturation, Perceived social norms

Introduction

As the number of immigrants in the United States has increased, the physical and psychosocial well-being of immigrants and their children has become a salient social and public health concern. Although increased attention has been paid to adolescent smoking among Asian-Americans, most investigations have considered Asian-Americans as a single group. Relatively few studies have gone beyond broad racial classifications to explore subgroup differences in factors contributing to smoking initiation (Chen et al., 1999; Landrine, Richardson, Klonoff, & Flay, 1994; Spigner & Gran-O'Donnell, 2001; Unger et al., 2001). Despite some degree of shared cultural values, there are sizable variations among Asian-American subgroups in its cultural heritage, immigration history to the United States, acculturation and social integration to the host culture (Berry, 1997; Bosrock, 1994; Ho, 1996; Lan, 2002; Liu, Ng, Weatherall, & Loong, 2000). These variations might well influence Asian-Americans' perception of social norms about health behaviors, including smoking. In this study, we explore social-cultural factors such as acculturation and social acceptability of smoking that may contribute to adolescent smoking in disaggregated sample of four Asian-American subgroups.

A few previous studies suggest that adolescent smoking rates differ among Asian-American subgroups, with Filipinos and Koreans showing the highest rates of both lifetime smoking and 30-day smoking. Chinese have the lowest rates, and Vietnamese are in the middle (Chen et al., 1999; O'Hare and Van Tran, 1998). Some of these studies examined the predictive effect of acculturation level on smoking initiation among Asian-American adolescents. However, results of the studies are inconsistent. Little is known about the effects of acculturation in conjunction with effects of smoking behavior of ancestral countries and perceived social norms on smoking behavior among specific Asian-American subgroups.

Smoking prevalence in countries of origin and in the U.S. among Asian-Americans

In the present study, we limit our attention to four Asian countries whose emigrants comprise the largest Asian-American subgroups in California: Chinese-Americans, Filipino-Americans, Korean-Americans, and Vietnamese-Americans. A cultural pattern common to all of these ancestral countries is that smoking is a normative behavior among males, but is rare among females. Smoking prevalence rates for the ancestral countries are shown in Table 1. In contrast, the gender gap in smoking among Asian-American adults as a whole is much smaller. The current smoking prevalence rate is considerably lower for adult males in the U. S. (29.7%) compared to the Asian countries, but is considerably higher for adult females (24.5%) in the U. S. (CDC, 2002).

Among adolescents in the countries of origin, similar gender gaps in smoking appear compared with adults, although the overall smoking rates are much lower. The gender disparity among adults in Asia is likely to shrink in the future, as adolescent females in Asia are now more likely to smoke than adult females. Among Asian-American adolescents, on the other hand, there is not much difference between genders. Current smoking prevalence rates for middle school students are 11.7% for boys and 10.2% for girls. Among high school students, the current smoking prevalence rates for male and female students are 28.8% and 27.3%, respectively (CDC, 2001).

Perceived social norm-prevalence and norm-attitude and smoking among Asian-American adolescents

Our focus in this study is on adolescents during the years of middle and high school, when they are at high risk for starting and establishing smoking habits (Greenberg & Psyzczynski, 1985; USDHHS, 1994). Adolescents are vulnerable to multiple inputs that

influence their perceptions and attitudes about smoking. Of great interest to the tobacco industry are the social norms regarding peer smoking (Gerber & Newman, 1989). Norms are what individuals perceive to be acceptable behavior for a given age group, gender, or other subgroup. Adolescents who made relatively high estimates of regular smoking prevalence have been reported to be more likely to try smoking and to become smokers (Chassin, Presson, & Sherman, 1990; Collins et al., 1987; Leventhal, Fleming, & Glynn, 1988; Sussman et al., 1993). Variation in norms regarding the perceived prevalence and popularity of smoking may be a mechanism that leads to variation in adolescent smoking among Asian-American subgroups.

Acculturation and smoking among Asian-American adolescents

Acculturation involves two dimensions: the maintenance of the traditional culture of one's own group and the interactions with and adaptation to the host country culture (Berry, 1997; Kosic, 2002). Typically, acculturation is the exchange of values and beliefs, language, customs and mannerisms that occurs when people with diverse cultural backgrounds come into contact with one another[8]. When immigrants move to a new country, they learn some aspects of the new culture and might adopt some practices of the new culture, including health-related behaviors such as tobacco use[7]. Although the state of knowledge about the relationships between acculturation and smoking among Asian-American adolescents, especially among Asian subgroups, still remains fragmentary, we anticipate that as Asian immigrants become more acculturated, their smoking patterns will become more like those of Americans. We expect that more acculturated Asian-American males will be less likely to smoke than their Asian counterparts, while more highly acculturated Asian-American females will be more likely to smoke than those in Asia. In some previous studies, acculturation has been identified as a risk factor for smoking for Asian-American adolescents (Chen & Unger, 1999; Chen et al., 1999;

O'Hare & Van Tran, 1998), but considering the smoking patterns in countries of origin, we expect this effect only for females; for males, we expect acculturation to be a protective factor.

The purpose of this study was to examine: 1) variation in adolescent smoking prevalence rates across Asian-American subgroups and gender; 2) the association between acculturation and adolescent smoking; 3) the association between perceived social norms and adolescent smoking. We expect differences in smoking prevalence rates across Asian-American subgroups. We hypothesize that acculturation will be associated with a higher risk for smoking for Asian-American female adolescents, but not for Asian-American male adolescents. We also hypothesize that the higher the perceived social norm-prevalence and attitudes is, the higher risk for smoking for Asian-American adolescents will be.

Method

Participants

The Asian-Americans in this study were a subsample from a larger study with 3268 respondents of several ethnicities. Since the primary goal of the current study was to examine predictors of adolescent smoking across the four Asian-American subgroups, statistical analyses were conducted on responses from 1139 students who self-identified as Chinese-Americans (N= 402), Filipino-Americans (N= 269), Korean-Americans (N= 198), and Vietnamese-Americans (N=270). The students were 8th and 9th graders recruited from 4 junior high schools and 6 high schools in three school districts in Los Angeles County (Weiss & Weiss, 2002). Questionnaires for 131 respondents who did not respond to at least 85% of the items were discarded

Procedures

Participants were recruited in individual classrooms. The researcher explained the study briefly while displaying an objective, nonjudgmental attitude toward smoking. The researcher

emphasized that participation in this study was an opportunity for them as adolescents to "have their voices heard". Those students who volunteered to participate signed student assent forms and were given parental consent forms to take home for their parents to sign. The consent procedure was approved by the Alliant International University Institutional Review Board.

On the researcher's return visit, students who presented both signed forms were administered a questionnaire. Students were assured that their participation was anonymous, that is, no names were requested on the questionnaires. Participants were instructed that there were no "right" or "wrong" answers, and that honest responses were crucial to the study. They completed a paper-and-pencil survey consisting of 149 items during a single class period; surveys were collected immediately upon completion.

Measures

Lifetime smoking. To assess lifetime smoking, one question was asked, "Have you ever tried smoking, even a few puffs?" Those students who responded "no" and "yes" were respectively coded as 'Never smokers' and 'Ever smokers'.

Past-30-day smoking. Past 30-day smoking was assessed with the question, "Think about the last 30 days. On how many of these days did you smoke cigarettes?" The criterion of daily smoking is not useful for research with adolescents; in the present sample, fewer than 1% of our respondents acknowledged smoking on all of the previous 30 days. Therefore, we scored the item so that anyone whose response was greater than zero was considered a past 30-day smoker.

Acculturation. The Short Acculturation Scale for Hispanics (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) was used to assess acculturation. Although this scale was developed for Hispanics, it examines three broadly applicable aspects of acculturation. The scale is composed of 12 items loading on three factors, "Language Use," "Media," and "Ethnic Social

Relations". It correlates highly with several validation criteria: respondents' generation, length of residence in the U.S., age at arrival, and ethnic self-identification. A higher score indicates a higher level of acculturation level to Western culture. This scale is short, culturally sensitive and has been validated for a Chinese-American population (Gupta & Yick, 2001). Its reliability coefficient is comparable to those for other published scales, with an alpha coefficient of .92 (Marin et al., 1987).

The obtained Cronbach's alpha for the current study was .85. Although the proportion of U.S. born respondents was similar across the four groups at more than 60%, there were significant differences in acculturation, $F(3, 1100) = 66.98$, $p = .000$. The possible range of acculturation scores was between 11 and 55; the overall mean acculturation level for the sample was 36.3 (SD = 8.02), just slightly above the midpoint of the scale. Filipino-Americans were the most acculturated, while Korean-American adolescents were the least acculturated. Chinese-Americans and Vietnamese-Americans expressed intermediate levels of acculturation.

Perceived social norms. We asked about perceived social norm-attitudes or acceptability of smoking by peers: "Do most people your age think it's OK for a girl to smoke?" "Do most people your age think it's OK for a boy to smoke?" These items were measured with 4-point Likert scales. Additionally, we asked for an estimate of perceived social norm-prevalence: "Out of every 100 students your age, how many do you think smoke cigarettes once a month or more?" Response options ranged from 0 to 100.

Data analysis

Chi-square analyses were used to assess differences in the prevalence rates of lifetime smoking and 30-day smoking by demographic characteristics. Stratified analyses were used to examine odds ratios for the four subgroups and gender. To control for confounding, demographic variables measuring grade, gender, ethnicity, socio economic status (SES), and immigrant

generation status were treated as covariates. To determine adjusted odds ratios (controlling for covariates) for smoking according to acculturation and social norms, multivariate logistic regression analyses were performed.

Results

Demographic characteristics of sample

Table 2 shows the demographic characteristics of the sample. The mean age of this sample was 14.2 (SD = 1.2) years. More respondents reported being the 9th graders (71.0%). Approximately half of the respondents were female (47.6%). Parents' educational attainment, an indicator of socioeconomic status (SES), was examined. Home ownership, another indicator of SES, yielded significant variation across subgroups, $\chi^2(3) = 18.8$, p = .000.

Smoking differences by subgroup and gender

There were significant differences in lifetime smoking and 30-day smoking across the four subgroups as shown in Table 3. Korean-American adolescents reported the highest lifetime smoking and 30-day smoking rates, followed by the Vietnamese-American and Filipino-American subgroups. Chinese-American adolescents reported the lowest smoking rates. Gender comparisons in smoking behavior across subgroups are shown in Table 4. Almost no gender differences in smoking prevalence among Asian-American adolescents were found, except that among Filipino-Americans, boys were more likely to have smoked within the past 30 days compared to girls.

Gender and subgroup differences in perceived social norms (acceptability and prevalence)

There was significant gender difference in perceived acceptability of smoking. Girls were more likely to think that their peers would find smoking acceptable (M = 4.36) compared to boys (M=3.95), $F(1, 1121) = 12.31$, $p = .000$. Also, significant differences in acceptability

ratings were found according to subgroup, $F(3, 1121) = 3.09$, $p = .026$, with Korean-American respondents giving the highest rating, followed by Filipinos and Vietnamese. Chinese-American respondents gave the lowest ratings.

In general, the mean perceived social norm-prevalence rates among those who had never smoked was 32.2%, while the mean for those who reported having tried smoking was 45.1% and was 51.0% for those who smoked within the past 30 days. Although the perceived prevalence rates were much higher than the actual prevalence rates for all subgroups, the subgroup pattern, with Korean-Americans being the highest on the perceived prevalence rating and Chinese-Americans the lowest, predicts the rank of smoking rates.

Association between acculturation, perceived social norms, and Asian-American smoking

Table 5 shows the results of multivariate logistic regression analyses of odds of smoking, according to acculturation and perceived social norms. All logistic regression models controlled for grade, gender, socio economic status (SES), and immigrant generation status. Although no significant association between acculturation and smoking was found for any of the subgroups, stratified analysis by gender indicated that higher acculturation was significantly associated with an increased risk of lifetime smoking for girls, but not for boys. Table 5 also shows that the perceived social norms were significantly associated with an increased risk of smoking for both boys and girls and for all the subgroups except for the Vietnamese-Americans.

Discussion

In contrast to previous studies on Asian-American adolescent smoking, most of which have investigated this population as an aggregated group, this study examined adolescent smoking among four Asian-American subgroups: Chinese-Americans, Filipino-Americans, Korean-Americans, and Vietnamese-Americans. Results did support the hypothesis that there

are differences in smoking prevalence rates across subgroups. Korean-American participants reported the highest levels of lifetime smoking and 30-day smoking, whereas Chinese-Americans reported the lowest levels on both indices. The Filipino-Americans were more likely to have tried smoking than the Vietnamese-Americans, but were somewhat less likely to report recent smoking. Differences in prevalence rates across subgroups were also found in a previous empirical study examining Asian-American subgroups in California (Chen et al., 1999; Unger, Trinidad, Weiss, & Rohrbach, 2004). Ancestral country has an effect, but there is not a simple correspondence between prevalence rates in the country of origin and those in our sample. The two countries with the highest smoking rates, Korea and China, are associated with the highest and lowest smoking rates in Los Angeles.

Instead, subgroup differences in smoking rates might be driven by differences in perceived social norm-prevalence. In general, the higher the estimate given, the more likely is a respondent to have engaged in smoking. The ranks in perceived social norm-prevalence for the subgroups correspond to the ranks of the actual prevalence rates for the subgroups, in that Korean-American adolescents ranked the highest on the perceived prevalence and their actual smoking prevalence rates is also the highest whereas Chinese-American adolescents ranked the lowest and their actual smoking rates are the lowest, too. Because this result is correlational, there are (at least) two ways to interpret the results. Our view is that adolescents expect to increase their popularity by engaging in popular behaviors (Erikson, 1963), so those who think smoking is more prevalent are themselves more likely to want to smoke (USDHHS, 1994). Alternatively, one might propose that the perception is driven by the existing differences, in that members of subgroups with higher smoking rates will inevitably see more smokers around them – if the peers they envision belong to their own ethnic group. In retrospect, it might have been

more effective for us to ask about estimated prevalence among "students in your ethnic group" rather than the global items we used.

There is one exception to the generalization that perceptions of smoking are connected to smoking behavior. Although females report higher perceived prevalence, they are not more likely to smoke than males. A possible explanation for this inconsistency is that, despite the wording of the question, which included the phrase "your age", the peers referred to by adolescent girls as they reflect upon their answers may include boyfriends. The boyfriends are likely to be older than the girls, and therefore more likely to have taken up smoking. Peers for the boys are likely to be closer to their own age.

Consistent with previously published reports showing that acculturation was a risk factor for Asian-Americans (Chen et al., 1999; O'Hare & Van Tran, 1998; Unger et al., 2000), we found that more highly acculturated girls were more likely to try a cigarette. Although there was considerable variation in level of acculturation across subgroups as measured by the Short Acculturation Scale, that variation did not match the smoking patterns among subgroups. However, the fact that gender is not a predictor of smoking in our sample is itself an indication that acculturation factors are at work. In Asia, males are overwhelmingly more likely to smoke than females, and reports from China show that this difference starts to become visible as early as age twelve (Li, Fang, & Stanton, 1999; Unger et al., 2001). In our Los Angeles data, the smoking rate for Chinese-American girls is higher than for girls in China, while the rate for Chinese-American boys is lower than for boys in China. The smoking rates for Chinese-American boys and girls are equivalent. Perhaps American cultural pressures against gender discrimination are involved in eliminating the anticipated disparity.

It is worth noticing that the overall prevalence rates in these data are low, and may be expected to increase as the children get older. We previously found higher prevalence rates of regular smoking (20% for males, 7% for females) in a small-scale study (N = 106) of Asian-American older adolescents (Weiss & Garbanati, 2004). Similarly, the National Youth Tobacco Survey reported that Asian-American smoking increased seven-fold from middle school to high school (Appleyard, Messeri, & Haviland, 2001). While the majority of smokers begin their habit in early adolescence, Asian-Americans continue to be at risk for smoking initiation throughout high school. Chen and Unger (1999) noted that, unlike other Americans, Asian-Americans do not experience a decline in risk after 15 years of age. Chen and Unger did not focus on gender, but the present results suggest that males are the ones who continue to be at risk. In order for the prevalence rates to reach current levels for adult Asian-American males, more boys will have to take up smoking as they mature. Nonetheless, Asian-American girls may also be at risk for increased smoking in later years. Although the current rates for girls were not different from those of boys, smoking prevalence among Asian-American girls was positively related to acculturation and was at a higher level than that of their counterparts in their countries of origin.

Limitations

The results of our study are based on participants' self-reports of their smoking behavior. Although the participants were assured that their responses were anonymous, they may have underreported their smoking behavior in an attempt to avoid criticism or to present themselves in a socially desirable way (Ong & Weiss, 2000). It is possible that the subgroup differences we found reflect differences in willingness to disclose smoking rather than actual differences in behavior. This may be a special concern with those of Asian ancestry, whose traditions emphasize loss of face and pleasing authority.

Caution is needed in generalizing the results to Asian-Americans living in other areas of the U.S. Our results are based on a sample of students from 8th and 9th grades across four Asian-American subgroups in Los Angeles County. In this environment, there are many fellow Asian-Americans to serve as models and to help maintain a strong cultural identity. In more ethnically isolated settings, mainstream norms may dominate (Weiss & Weiss, 2002). These results also may not generalize to adolescents in other Asian-American subgroups. Specifically, Asian-Americans are a population with diverse cultural backgrounds, and they migrated to the United States for different reasons. Even within Chinese-Americans, those who came from mainland China may differ culturally from those who came from Hong Kong or Taiwan.

There may not have been a wide enough range of acculturation in our sample to detect that variable's effect on smoking. Although there were significant differences among the subgroups, most of the students were fairly close to the middle of the acculturation scale. In general, finding influential predictor variables is difficult when the critical behavior is rare. Fortunately, smoking does appear to be a behavior that is limited to a small minority of Asian-American adolescents. Additionally, there are possible confounds that are difficult to assess. For example, very recent immigrants may be less likely to participate because of language limitations, although consent forms and questionnaires in the requisite languages were available. Other factors may also play a role in the association between acculturation and adolescent smoking, including neighborhood characteristics and peer influence, which were not available in this dataset. Perceived ethnicity of the researcher, who in this study was Chinese, may influence cooperation differentially.

Conclusion

Our goal was to determine whether a more fine-grained partitioning of an ethnic

distribution would yield interesting differences in the realm of smoking among adolescents. Our results provide new information about how acculturation might affect Asian-American adolescents' perception about smoking and how acculturation influences health-related behaviors differently according to gender. A more complete understanding of how the acculturation process differs across Asian-American subgroups and by gender, and how contact with a new culture influences adolescent smoking, are necessary for the development of culturally tailored smoking prevention programs for Asian-American adolescents. It may prove fruitful to examine Hispanic subgroups, as has been done for adults by Perez-Stable et al. (2001), in a similar way.

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Table 1. Current Smoking Prevalence in Four Asian Countries by Gender

Countries	Adult Smoking (%)		Adolescent Smoking (%)	
	Male	Female	Male	Female
China	53.4	4.0	11.1	6.4
Korea	64.8	5.5	29	13
Philippines	50.6	8	37.3	18.4
Vietnam	50.7	3.5	20	N/A

Note: Age definitions for adults vs. adolescents differ slightly across countries.

Source: Available at URL: www.cdc.gov/Tobacco/global/gyts/GYTS_factsheets.htm (2002)

Table 2. Demographic Characteristics of the Sample by Subgroups

Demographic Characteristics	Chinese-American N (%) 402 (35%)	Filipino-American N (%) 269 (24%)	Korean-American N (%) 198 (17%)	Vietnamese-American N (%) 270 (24%)
Age: mean (SD)	14.5 (1.2)	13.8 (1.3)	14.1 (1.2)	14.1 (1.1)
Grade				
8th	88 (21.8%)	107 (39.7%)	49 (24.7%)	85 (31.5%)
9th	311 (77.4%)	162 (60.2%)	148 (74.7%)	185 (68.5%)
Gender				
Female	183 (45.5%)	140 (51.7%)	91 (45.9%)	127 (47.0%)
Male	218 (54.2%)	129 (47.9%)	106 (54.0%)	142 (52.6%)
Parental Education				
High (< 12 years)	186 (46.3%)	224 (83.3%)	143 (72.2%)	104 (38.5%)
Low (> 12 years)	160 (39.8%)	16 (6.0%)	34 (17.2%)	100 (37.0%)
Own House				
Yes	208 (51.7%)	149 (55.4%)	85 (42.9%)	105 (38.9%)
No	190 (47.3%)	118 (43.9%)	108 (54.5%)	163 (60.4%)
Place of Birth				
U.S.	244 (60.7%)	162 (60.2%)	128 (64.6%)	185 (68.5%)
Other country	155 (38.6%)	107 (39.8%)	68 (34.3%)	82 (30.4%)
Generation Status				
1st generation	150 (37.3%)	105 (39.0%)	66 (33.3%)	82 (30.4%)
2nd generation	216 (53.7%)	124 (46.1%)	119 (60.1%)	178 (65.9%)
3rd+ generation	27 (6.7%)	38 (14.1%)	11 (5.6%)	6 (2.2%)
Acculturation	(N = 389)	(N = 265)	(N=192)	(N=262)
Mean (SD)	34.4 (8.24)	41.3 (7.30)	32.55 (7.81)	36.71 (5.64)

Note: Percentage decompositions do not add to 100% because of missing responses.

Table 3. Subgroup Differences in Smoking Behavior

Variable	Lifetime	χ^2 *p value*	Past 30-day Smoking %	χ^2 *p value*
8th Grade (29.0%)	14.9	<0.001	2.7	<0.001
9th Grade (71.0%)	27.5		10.2	
Female (47.6%)	22.9	0.50	7.1	0.243
Male (52.4%)	24.7		8.9	
Chinese-American	19.4	0.002	5.3	0.016
Filipino-American	28.3		7.8	
Korean-American	31.3		12.6	
Vietnamese-American	20.7		9.3	
Total	23.9		8.1	

Note: Percentage decompositions do not add to 100% because of missing responses.

Table 4. Gender Differences in Smoking Prevalence by Subgroup

	Lifetime Smoking %		χ^2	Past 30-day Smoking %		χ^2
	Female	Male	*p* value	Female	Male	*p* value
Chinese-American	19.1	19.3	0.97	4.9	5.1	0.95
Filipino-American	25.0	31.8	0.22	3.6	12.5	0.007**
Korean-American	27.5	34.9	0.26	13.2	12.3	0.85
Vietnamese-American	22.8	19.0	0.44	9.4	9.2	0.93

Table 5. Odds-Ratios for Smoking Behaviors, according to Perceived Acceptability of Smoking and Acculturation by Gender and Subgroup

	Lifetime Smoking		Past 30-day Smoking	
	OR	95% CI[1]	OR	95% CI[1]
Asian-American Girls				
Perceived social norm	1.36**	(1.10, 1.69)	1.62**	(1.14, 2.32)
Acculturation	1.03*	(1.00, 1.06)	0.99	(0.94, 1.04)
Asian-American Boys				
Perceived social norm	2.21***	(1.77, 2.75)	2.42***	(1.70, 3.46)
Acculturation	0.99	(0.96, 1.02)	0.99	(0.95, 1.04)
Chinese-Americans				
Perceived social norm	1.57***	(1.32, 1.87)	2.55***	(1.68, 3.88)
Acculturation	0.98	(0.94, 1.02)	0.93	(0.85, 1.02)
Filipino-Americans				
Perceived social norm	1.23**	(1.10, 1.53)	1.47**	(1.12, 1.94)
Acculturation	0.99	(0.95, 1.04)	0.96	(0.89, 1.03)
Korean-Americans				
Perceived social norm	1.43***	(1.17, 1.74)	1.17	(0.89, 1.52)
Acculturation	1.04	(0.99, 1.09)	0.98	(0.92, 1.06)
Vietnamese-Americans				
Perceived social norm	1.08	(0.89, 1.32)	1.09	(0.84, 1.42)
Acculturation	0.99	(0.93, 1.07)	1.03	(0.93, 1.14)

Note: $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$

[1]Covariates: grade, gender, ethnicity, socioeconomic status, and immigration status