

# Racial Discrimination and Substance Use among Korean American Adolescents

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**Purpose:** The goal of this study was to examine the association between perceived racial discrimination and substance use and the potential moderating effect of perceived parental affection between the two variables. **Methods:** A total of 101 Korean American adolescents participated in this cross-sectional study utilized an online survey. Descriptive statistics were used to describe for means and frequencies and the patterns of substance use. Logistic regression analysis was also used to examine the association between perceived discrimination and substance use. **Results:** Ninety percent of the participants reported perceiving racial discrimination, and 21% had used at least one kind of substance in the month prior to taking the survey. The most frequently used substance was alcohol, followed by marijuana and tobacco products. Logistic regression analysis revealed a link between perceived racial discrimination and substance use (OR = 1.74, 95% CI = 1.01, 3.00). However, parental affection did not moderate between racial discrimination and substance use. **Conclusion:** These findings suggest that perceived racial discrimination is positively associated with substance use among Korean American adolescents, and health care providers, counselors, and school nurses should screen for discrimination-related stress and substance use in this population.

**Key Words:** Korean American adolescents, Parental affection, Racial discrimination, Substance use

## INTRODUCTION

Substance use (use of alcohol, tobacco, illicit drugs) among adolescents has been increasing in American society despite our best efforts at prevention (Fang, Barnes-Ceeney, Lee, & Tao, 2011; Griffin, Botvin, Scheier, Diaz, & Miller, 2000; Ryabov, 2015; Shin, D'Antonio, Son, Kim, & Park, 2011; Wu, Woody, Yang, Pan, & Blazer, 2011). Those who use substances during their adolescence may experience irreversible negative outcomes because of their developing brains' vulnerability (Steinberg, 2011). More than one-quarter of American adolescents between 12 and 17 years of age had tried alcohol and one-fifth had experimented with illicit drugs, with alcohol reported as the most frequently used substance among this population (Substance Abuse and Mental Health Services Administration, 2010). Although substance use among Asian American adolescents (11.7%) were lower than rates among Native

American (31%), Caucasian (20%), Hispanic (18.3%), and African American (18.6%) adolescents (Wu et al., 2011), Ecstasy use rates among Asian American adolescents were similar to those of Caucasian adolescents and higher than other ethnic groups (Wu, Liu, Kim, & Fan, 2011). Studies also reported high rates of smoking cigarettes among Asian American adolescents; in these studies, Korean American adolescents formed the highest user group (Rosario-Sim & O'Connell, 2009; Weiss & Garbanati, 2004). A few studies also reported Korean American adolescents having high rates of experiencing with drinking alcohol (66.3% females and 75.3% of males) and smoking (31.3%) (Nakashima & Wong, 2000; Weiss, Garbanati, Tanjasiri, Xie, & Palmer, 2006). Perceived racial discrimination has been identified as one of the risk factors for substance use, including prescription drug use, illicit drug use, alcohol abuse, and cigarette smoking among Asian American adults and adolescents (Chae et al., 2008; Park, 2008).

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Racial discrimination refers “to the beliefs and practices that denigrate and exclude individuals or groups of people because of their race or color of skin” (Yoo & Lee, 2008). Until the 1990s, generally it was thought that the target of racial discrimination was African Americans even if others were targeted as well. However, there have been increased reports of anti-Asian incidents in the past two decades (Liang, Li, & Kim, 2004) as the Asian immigrant population has rapidly grown. Several studies have reported a strong relationship between perceived racial discrimination and mental health, even if no actual discrimination existed (Juang & Cookston, 2009; Noh & Kaspar, 2003; Yoo & Lee, 2008). Although experiencing racial discrimination is a common stressor among Asian American adolescents, this group was left out of the mainstream of discrimination-related research until the late 1990s (Fisher, Wallace, & Fenton, 2000). Several studies reported perceived racial discrimination as associated with distress and depressive symptoms among minority adolescents (Fisher et al., 2000; Grossman & Liang, 2008; Juang & Cookston, 2009; Shin et al., 2011). However, the association between perceived racial discrimination and substance use particularly among Korean American adolescents is not clear because the association has not been well-studied in more recent times.

This study examined the possible moderating effect of perceived parental affection between perceived racial discrimination and substance use. The perception of low parental affection was related to substance use among European, African, Asian, and Hispanic American adolescents (Rhoner, Khaleque, & Cournoyer, 2005). Conversely, a high level of parental affection was associated with lower levels of substance use among Asian American adolescents (Guilamo-Ramos, Turrisi, Jaccard, Wood, & Gonzalez, 2004). Other research revealed that parenting monitoring served as a moderating factor between gender/family structure and substance use among minority adolescents (Griffin et al., 2000). When adolescents perceived less parental affection, they tended to more frequently interact with friends who used substances and engage in substance experimentation (Weiss & Garbanati, 2004). However, there have not been enough studies reported if perceived parental affection moderates between perceived racial discrimination and substance use among Korean American adolescents. The purpose of this study was to examine perceived racial discrimination, patterns of substance use, and the potential moderating effect of perceived parental affection between the two variables among Korean American adolescents. Accordingly, the researcher developed the following hypotheses:

- Perceived racial discrimination is positively associated

with substance use among Korean American adolescents.

- Perceived parental affection moderates the relationship between perceived racial discrimination and substance use.

## METHODS

### 1. Participants and Data Collection

This cross-sectional study utilized an online survey. Participants included 101 Korean American adolescents (14 to 18 years old) living in the Pacific Northwest. Convenience and snowballing sampling methods were used to recruit a variety of Korean American adolescents. The inclusion criteria were (1) Korean American adolescents who could read, write, and understand English fluently; (2) were 14 to 18 years old, in grades 9 through 12; (3) had at least one Korean American parent; and (4) were living with their parent(s) at the time of the survey. Korean adolescents living abroad in the U.S. were excluded. The term Korean American includes U.S.-born Koreans, naturalized citizens who were born outside of the United States, and Korean citizens who are permanent U.S. residents.

Before participant recruitment began, the study procedures were reviewed and approved by Institutional Review Board at the institution where the author serve to ensure the protection of human subjects. Data collection took place from August 2012 through December 2012.

The researcher created an online survey using Web Q, a program approved by the IRB for use with research participants. Web Q is convenient and allows the creation of anonymous online surveys. The researcher contacted the youth pastors at local Korean churches to gain permission to recruit adolescents through their programs. When participants went to the survey website, they were able to view the Information Statement and were asked whether they agreed or disagreed to participate in the study. Adolescents gave their assent by clicking “I agree.” The next screen listed the inclusion criteria and asked participants if they met them. The survey automatically stopped if the inclusion criteria were not met. After finishing the demographic data, participants were able to print a page to receive a \$10 Panera Bread gift card. Once they printed the page, they were asked to click the “submit” button. Once the required number of participants was reached, the researcher closed the survey site, and all data were imported into the Statistical Package for the Social Sciences (SPSS) 21 program via Microsoft Excel.

## 2. Measures

### 1) Substance Use Index.

The Substance Use Index includes four sections of a self-reporting questionnaire that ask about the use of substances such as alcohol, tobacco products, marijuana, Ecstasy, cocaine, LSD, heroin, PCP, stimulants, as well as gas- or fume-sniffing. Questions focused on lifetime experience, use in the month prior to taking the survey, frequency, and usage by family and/or friends. The last section asks for reasons why the participant uses substances. Created by the researcher, this index is based on the National Institute on Drug Abuse (NIDA) screening tool (NMAssist, n.d.), which is used in general medical settings by clinicians. The NIDA screening tool asks about the use of alcohol, tobacco products, prescription drugs for non-medical use, and illegal drugs, including other names of drugs used among adolescents, in the past year. For the current study, this index asked whether the participant had ever tried a substance and their use of substances in the past month. Participants were asked to report frequency of use to assess the severity of substance use. Finally, the index inquired if family members or friends used substances.

### 2) Adolescent Discrimination Distress Index (ADDI).

The Adolescent Discrimination Distress Index (ADDI) is a 15-item self-reported scale to measure adolescents' perceptions of whether they feel discriminated against within institutional, educational, and peer contexts (Fisher et al., 2000). Each situation asked if they had experienced discrimination because of their race or ethnicity through dichotomous responses "no" or "yes." An answer of no was scored as 0. Adolescents who answered yes were then asked to rate how upsetting the experience was by using a 5-point Likert-like scale ranging from 1=not at all upsetting to 5=extremely upsetting. Sample questions are "you were given a lower grade than you deserved" for educational context, "you were hassled by police" for institutional context, and "other kids called you racially insulting names" for peer context. The score ranged from 0 to 75, and higher scores indicated greater levels of perceived distress. Although this scale has not been used previously with Korean American adolescents, a sample of African, Hispanic, Asian, and European American adolescents resulted in a Cronbach's  $\alpha$  of 0.72 for the institutional subscale, 0.60 for educational subscale, and 0.60 for peer subscale (Gamst, Liang, & Der-Karabetian, 2011). The validity of the measure was established based on a strong inverse relationship between self-esteem scores and ADDI among African American and Asian American adolescents (Fisher

et al., 2000). The Cronbach's  $\alpha$  for the current study was 0.86.

### 3) Child Parental Acceptance-Rejection Questionnaire (CPARQ), Short Version.

The CPARQ uses a 4-point Likert-like scale with response options ranging from 1 (almost always true) to 4 (almost never true). Several items were reverse scored to minimize response bias. The CPARQ Short Version is a 24-item self-report questionnaire to measure an adolescent's perceptions of parental acceptance or rejection. The sample questions are "my mother says nice things about me," "my mother goes out of her way to hurt my feelings," "my mother pays no attention to me," and "my mother seems to dislike me" (Rohner, 2005). The total score of the CPARQ ranges from 24 (maximum perceived acceptance) to 96 (maximum perceived rejection). A score of 56 and higher is viewed as parental rejection. Rohner (2005) reported evidence of convergent and discriminant validity. Reliability coefficients for the CPARQ were reported as 0.70 for mothers and 0.57 for fathers among Jamaican youth (Steely & Rohner, 2006). The Cronbach's  $\alpha$  for the current study was 0.96 for mothers and 0.95 for fathers.

### 4) Demographic Data.

The demographic data obtained from participants included age, grade, gender, grade point average (GPA), length of stay in the U.S., family income, languages spoken at home, place-of-origin, ethnic identity, religious preference, parents' education level, parents' length of stay in the U.S., participants' perception of acculturation level of their parents, and number of Korean and American friends. The survey asked what language the adolescent used when speaking to his or her mother and father and what language each parent used to speak to the adolescent.

## 3. Data Analysis

Descriptive statistics were used to describe demographic information and racial discrimination for means, standard deviation, and frequencies and the patterns of substance use. Logistic regression analysis was also used to examine the association between perceived discrimination and substance use. Age was found to be associated with substance use and was controlled in data analysis. The substance use data were divided into two groups, no use and use. To test the moderating effects of perceived parental affection between racial discrimination and substance use, logistic regression analysis was conducted. In Step 1, the control variable, age, was entered, followed by

racial discrimination being entered in Step 2. The CPARQ was entered in Step 3, and the interaction term (racial discrimination x CPARQ) was entered in Step 4. To serve as moderator, the interaction term should be statistically significant (Baron & Kenny, 1986).

## RESULTS

The study sample included 73 girls and 28 boys, with the age ranging from 14 to 18 and a mean age of  $15.83 \pm$  years ( $SD=1.17$ ). The average length of stay in the U.S. for the participants was  $12.40 \pm 4.65$  years, and the participants identified themselves as Korean (23.8%), Korean American (68.3%), and American (7.9%). Forty-six adolescents (45.5%) were born in Korea, 54 adolescents (53.5%) were born in the U.S., and 1 adolescent was born in Canada. Eighty-nine adolescents (88.1%) were Protestant, 7 were Catholic Christian, and 5 adolescents were Buddhist or no religion. The average number of years lived in the U.S. for their mothers was  $15.63 \pm 9.34$ , and  $17.2 \pm 10.92$  for their fathers.

Among 101 adolescents, 91 participants (89.1%) reported that they experienced racial discrimination on at least one item. Table 1 presents the description of racial discrim-

ination for each item. The most frequent situation in which participants experienced racial discrimination was item 11, "other kids called you racially insulting names" (64 participants); 31 of those 64 participants reported it as from "somewhat" to "extremely upsetting." The next frequent situations were "you were given a lower grade than you deserve" (59 participants), "you received poor service at a restaurant" (46 participants), and "teachers expected more of you than of other students" (43 participants). The situations in which participants experienced less racial discrimination were "you got hassled by police" (11 participants), and "other kids did not want you to join a school club" (13 participants).

The findings revealed that 21 participants (20.8%) used at least one type of substance and six participants had used more than one kind of substance in the past month. The most frequently used substance was alcohol, with 18 adolescents (12 girls (16.4%) and 6 boys (21.5%)) having used it in the past month. Among those adolescents, 14 participants had drunk alcohol less than once per week, while four participants had used it 1~2 times/week. Marijuana was the second most frequently used substance with 7 adolescents (4 girls and 3 boys) reporting usage. Only 4 participants (3 girls and 1 boy) reported using tobacco.

**Table 1.** Description of Racial Discrimination

(N=101)

Items	Yes with no or little upsetting	Yes with somewhat to extremely upsetting	No	Missing
	n (%)	n (%)	n (%)	
1. You were given a lower grade than you deserve.	8 (7.9)	51 (50.5)	42 (41.6)	0
2. You were unfairly disciplined or given after-school detention.	5 (5.0)	20 (19.8)	76 (75.2)	0
3. You were not selected to be in an honors or advanced level class.	12 (12.0)	15 (15.0)	73 (73.0)	1
4. Other kids did not want you to join a school club.	5 (5.0)	8 (7.9)	88 (87.1)	0
5. Teachers expected more of you than of other students.	33 (32.7)	10 (9.9)	58 (57.4)	0
6. Other kids thought you didn't know English very well.	19 (18.8)	20 (19.8)	62 (61.4)	0
7. You received poor service at a restaurant.	14 (13.8)	32 (31.7)	55 (54.5)	0
8. Other kids did not include you in their activities.	14 (13.8)	23 (22.8)	64 (63.4)	0
9. You got hassled by police.	3 (3.0)	8 (7.9)	90 (89.1)	0
10. You got hassled by a store clerk or store guard.	4 (4.0)	9 (8.9)	88 (87.1)	0
11. Other kids called you racially insulting names.	33 (32.6)	31 (30.8)	37 (36.6)	0
12. Teachers expected less of you than of other students.	8 (7.9)	9 (8.9)	84 (83.2)	0
13. People acted like they thought you were not smart.	17 (17.0)	18 (18.0)	65 (65.0)	1
14. People acted like they were afraid of you.	12 (12.0)	6 (6.0)	82 (82.0)	1
15. You were threatened by other kids.	5 (5.0)	13 (12.8)	83 (82.2)	0

Lifetime experience with substance use was much higher. Forty-two participants (41.6%) had tried alcohol (30 girls and 12 boys), and 11 participants (10.9%) had tried tobacco (7 girls and 4 boys) and marijuana (7 girls and 4 boys) in the past. In addition, 34 participants (33.7%) had friends who drank alcohol, 35 participants (34.7%) had friends who used marijuana, and 17 participants (16.8%) had friends who used tobacco. Table 2 presents the patterns of substance use. The reasons for using substances were having fun (8 participants), relieving stress (7 participants), curiosity (4 participants), and peer pressure (2 participants).

The result of correlation indicated that age was found to be associated with substance use among the demographic data and variables. Based on the data, the association between racial discrimination and substance use was examined using logistic regression analysis while controlling age in the analysis. The perceived racial discrimination was uniquely predictive of substance use ( $b=.05$ ,  $SE=.02$ ,  $p<.05$ ,  $OR=1.10$ ,  $95\% CI=1.01, 1.10$ ,  $R^2=.11$ ), which indicates that 1 unit (15points) change of perceived racial discrimination increased 1.10 times in substance use, holding age constant at average. Age was also significantly and uniquely predictive of substance use ( $b=.66$ ,  $SE=.26$ ,  $p<.5$ ,  $OR=1.94$ ), which shows that a one-year change in age increased substance use by 1.94 times. Therefore, hypothesis 1 was supported.

In order to examine the moderating effects of perceived parental affection between racial discrimination and substance use, a series of logistic regression analysis was con-

ducted while controlling for age. Table 3 depicts the summary of logistic regression to predict substance use from racial discrimination and to test the moderating effect of parental affection between racial discrimination and substance use. For maternal/paternal affection, in Step 1, age was entered and the racial discrimination was entered at Step 2. At Step 3, either maternal or paternal affection was entered. Then the interaction term was entered as the final step. The results showed maternal or paternal affection did not serve as a moderator between perceived racial discrimination and substance use. Therefore, hypothesis 2 was not supported.

## DISCUSSION

Results indicate that 90 percent of Korean American adolescents perceived racial discrimination which caused some degree of stress. The most frequent situation experienced was being called racially insulting names. This finding was consistent with a previous report which revealed high percentages of Asian American adolescents reported perceived racially insulting name-calling (Fisher et al., 2000). Although reports of racial discrimination by peers were highest for youth of East and South Asian descent, high percentages of teenagers from all ethnic groups reported being called racially insulting names and being excluded from activities because of race. Getting hassled by police was the least frequent situation. This might be because Korean Americans have fewer situations to face po-

**Table 2.** Patterns of Substance Use

(N=101)

Variables	Past month use	Lifetime experience	Any family member use	Number of friends know		
				None	1~4	5 and more
Alcohol	18	42	46	67	11	23
Tobacco	4	11	29	84	12	5
Marijuana/pot/grass/pot/weed	7	11	2	66	15	20
Ecstasy/rave/love drug/XTC	1	3	0	96	2	3
Cocaine/crack/coke	1	2	1	96	3	2
LSD/mushrooms/acid/boomers	0	3	0	95	3	3
Heroin/opiates/poppy/murphy	1	1	1	97	2	2
PCP/angel dust/peace pill	0	2	0	100	0	1
Stimulants/fen-phen/speed	1	2	1	100	0	1
Benzodiazepines/transx/downers	0	1	0	100	1	0
Crosstops/whites/speed/Dexies/Christmas	0	2	0	100	1	0
Sniffing gases/fumes/glue	0	1	1	99	1	1

LSD=lysergic acid diethylamide; PCP=phencyclidine.



**Table 3.** Summary of Logistic Regression Predicting Substance Use and Testing Moderating Effects of Maternal/Paternal Affection between Racial Discrimination and Substance Use

Variables	Model 1			Model 2 <sup>a</sup>			Model 2 <sup>b</sup>		
	b	SE	OR	b	SE	OR	b	SE	OR
Age	.66 <sup>†</sup>	.26	1.94	.65 <sup>†</sup>	.26	1.92	.62 <sup>†</sup>	.27	1.85
Racial discrimination (RD)	.05 <sup>†</sup>	.02	1.10	.04	.07	1.04	-.08	.09	.93
Maternal affection (MA)				.01	.02	1.00	-	-	-
Paternal affection (FA)				-	-	-	-.02	.03	.98
RD × MA				.01	.01	1.0	-	-	-
RD × FA				-	-	-	.01	.01	1.0

<sup>†</sup>  $p < .05$ .

lice in general. Getting discouraged from joining a school club was a less-frequent situation, but 37 adolescents responded that they were excluded from other students' activities. They also felt they had received a lower grade than they deserved due to their ethnicity. These findings suggest Korean American adolescents may experience a high level of discrimination in school settings, raising a concern for academic risk factors in this population as a study reported that racial discrimination was associated with poor adjustment (Seol, Yoo, Lee, Park, & Kyeong, 2016).

The study also found that alcohol was the most frequently used substance among Korean American adolescents, which is consistent with the national report (Substance Abuse and Mental Health Services Administration, 2010). The current alcohol use rate was less (approximately 18%) than previous findings reported by Fang et al., (2011a) (38.5% among Asian American) and Park & Kim (2016) (48.4% of males and 37% of females among Korean adolescents). Lifetime experience rate for alcohol was also smaller than previously reported (41.6% vs. 66.3% for girls, 42.9% vs. 75.3% for boys) among Korean American adolescents (Nakashima & Wong, 2000). It also noted substance use rate was lower among Korean American adolescents in the U.S. than adolescents in Korea. This finding may be influenced by the fact that participants were recruited from churches rather than from the general community. Although churchgoers may drink alcohol, one study found that conservative Christian church attendees consumed less alcohol than those who attended Catholic churches or no church among Korean American immigrants (Kang Sim et al., 2013). In fact, 89 participants were Protestant, and that may have contributed to the low number of substance use reports in the current study.

The results also indicated that age and perceived racial discrimination were associated with substance use among Korean American adolescents. Older age was positively

associated with substance use which was consistent with previous report in Korea (Park & Kim, 2016). Also, when participants perceived racial discrimination with a high level of stress, they were more likely to use substances. Previous studies reported that racial discrimination was associated with mental health problems among Asian Americans (Checn, Szalacha, & Menon, 2014; Fisher et al., 2000; Grossman & Liang, 2008; Juang & Cookston, 2009; Shin et al., 2011). Several studies reported that perceived discrimination was related to substance use among Asian American adults and adolescents (Chae et al., 2008; Chen et al., 2014; Park, 2008). This study's results showed that perceived racial discrimination was predictive of substance use among Korean American adolescents, and hypothesis 1 was supported.

This study also examined potential moderating effects of parental affection between perceived racial discrimination and substance use. However, maternal affection or paternal affection did not moderate significantly between the two variables. It is not clear why there was no significant interaction term. It is possible that the substance use rate was considerably low and the sample size was small which contributed to the non-significant results.

One of the major limitations in the study was self-reporting from the adolescent participants, which could weaken the reliability of the data. Also, there is a strong stigma toward substance use among Korean society; therefore, the adolescents may not have fully disclosed their use of substances. However, they were encouraged to be honest since the survey was completely anonymous. Recruitment was also limited to local ethnic churches, and not many non-church going Korean American adolescents participated in the study. Thus, it is difficult to generalize the study results. The substance use among Korean American adolescents may be higher within the community at large. However, this study is innovative because the current study examined the relationship between perceived

racial discrimination and substance use among Korean American adolescents for the first time and raised a need for further research studies in this population.

## CONCLUSION

The study findings suggest that Korean American adolescents perceive a high level of racial discrimination, and it was associated with substance use in this population. It is important for health care providers, counselors, and school nurses to be aware of discrimination-related stress, and they should screen for substance use, especially alcohol consumption, among Korean American adolescents. Resources are also needed to provide help and support to Korean American adolescents when they experience high levels of stress related to racial discrimination and when substance-related issues occur in their lives. Additionally, Korean American parents need access to educational programs that explain possible risky behaviors during adolescence as a part of development and provide communication strategies they can employ with their adolescents about substance use.

Future research focused on a larger and more diverse sample collected by random sampling from this community is needed to generalize the study results and to find other mediating and moderating factors in this population, such as self-efficacy and coping skills. It is also necessary to study the association between racial discrimination and other health outcomes, such as mental health or delinquent behavior. Additionally, future research needs to focus on intervention programs designed to reduce both substance use and stress related to racial discrimination among Korean American adolescents.

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