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CORRELATES OF DEPRESSION IN ASIAN-AMERICAN ADOLESCENTS IN NEW YORK CITY



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Introduction

- In the process of doing a study of smoking behavior among Asian-American adolescents in New York City, a high rate of depressive symptoms was discovered in both smokers and nonsmokers which prompted the investigators to explore the correlates of depression among the Asian-American adolescents.
- The purpose of this study was to investigate the correlates of depression among the Asian-American adolescents.

Background

- The prevalence of depression by early adolescence is estimated at 2% and 8% (Lewinsohn, Rohde, & Seeley, 1998).
- Girls are more vulnerable to depression—more socially oriented and dependent on positive social relationships than boys (Allgood-Merten, Lewinsohn, & Hops, 1990).
- Cultural marginalization is significantly related to depressive symptoms in Korean, Chinese, and Japanese-American adolescents and the parents in the US (Kim, Gonzales, Stroh, & Wang, 2006) .

Background (cont)

- Depression in late-immigrant Asian-American youth can be explained by parent–adolescent conflicts (Greenberger & Chen, 1996).
- Significant predictor of emotional problems in Korean-American adolescents are longer length of residence in the US—along with poor self-esteem, greater parental conflict, poor peer relationships, and lower grade point average (Cho & Bae, 2005).
- Depression and language acculturation correlate with smoking among Asian-American adolescents in NYC (Rosario-Sim & O'Connell, 2009).

Hypothesis

- Adolescents with higher depressive symptom scores were likely to be older, female, and less English language acculturated; to have arrived in the United States after 7 years of age, have less-educated parents; have lower school performance, not currently enrolled in school and a current smoker.
- In addition, the following question was addressed: How are the adolescents in the different ethnic groups differ in their depressive symptom scores?

Method

Design

- Cross-sectional design

Sample

- N = 328 Asian-American adolescents (Power of 0.80 and a medium effect size of 0.4) 16 to 19 years of age
- Ethnicity = Chinese, Filipino, Korean, “Other” (South Asian/Indian, Japanese, Vietnamese and multiethnic)

Measures

- 25-item Demographic questionnaire
- 22-item Smoking Questionnaire
- 20-item Depression Questionnaire (CES-D)
- 7-item English Usage Questionnaire (Language Acculturation Index)

Data Analysis

- Linear regression with stepwise selection was used to test the hypothesis.
- Tukey's adjustment for multiple testing was used to estimate the effect of smoking status in each ethnicity group.
- South Asian/Indian, Japanese, Vietnamese and multiethnic were collapsed to "Other."
- Twelve participants were excluded from the final analysis because they reported receiving either medication or counseling for depression.
- Descriptive statistics of the variables under investigation are presented in Table 1.

Table 1. Frequencies, Means, and Standard Deviations of Independent Variables and CES-D Scores of All Participants and Without Those Receiving Depressive Medications and on Counseling

Sample size	<i>N</i> = 328			<i>N</i> = 316		
Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Age (in years)						
16	90	16.71	11.03	86	16.52	10.92
17	54	17.09	9.35	52	16.65	9.22
18	106	18.33	11.35	104	18.17	11.39
19	78	20.69	11.53	74	19.78	11.10
Total	328	18.24	11.05	316	18.85	10.89
Gender						
Female	179	17.61	10.02	175	17.54	9.95
Male	149	19.00	12.17	141	18.23	11.98
Total	328	18.24	11.06	316	17.85	10.89
Ethnicity						
Chinese	189	18.56	10.57	173	17.99	10.49
Filipino	38	16.84	12.08	32	15.75	11.23
Korean	58	15.66	9.29	57	15.53	9.32
South-Asian	34	21.47	13.85	33	21.15	13.91
Other	9	22.00	12.93	21	21.00	10.99
Total	328	18.24	11.06	316	17.85	10.89
Age of arrival in the U.S.						
Before 7	232	17.03	10.81	226	16.80	10.78
After 7	91	21.12	11.40	85	20.40	11.00
Total	323	18.19	11.12	311	17.78	10.94

Table 1 (cont) Frequencies, Means, and Standard Deviations of Independent Variables and CES-D Scores of All Participants and Without Those Receiving Depressive Medications and on Counseling

Sample size	<i>N</i> = 328			<i>N</i> = 316		
Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Current enrollment in school						
No	23	25.61	10.62	20	24.50	10.44
Yes	305	17.69	10.91	296	17.40	10.79
Total	328	18.24	11.06	316	17.85	10.89
Maternal education						
8th grade or some HS	72	20.50	10.75	69	19.90	10.57
HS grad or some college	92	16.88	10.90	90	16.70	10.58
College and grad school	93	17.33	11.67	88	16.59	11.45
Total	257	18.06	11.21	247	17.55	10.95
Paternal education						
8th grade or some HS	46	19.98	9.89	45	19.87	9.98
HS grad or some college	82	18.20	11.14	77	17.52	10.63
College and grad school	122	17.23	11.74	119	16.78	11.52
Total	250	18.05	11.23	241	17.59	10.98
Smoking status						
Current nonsmoker	263	16.62	10.39	256	16.44	10.34
Current smoker	65	24.82	11.32	60	23.87	11.22
Total	328	18.24	11.06	316	17.85	10.89

Results

- Initial analysis revealed that 168 (51.2%) of the participants scored at or above the cut-off point of 16 on the CES-D Scale, with mean score of 18.25, $SD = 11.05$.
- When the 12 participants were removed, the adjusted total sample was 316, the mean CES-D score was = 17.85 ($SD = 10.88$), and 50% ($n = 158$) of the adolescents 16 or higher on the CES-D.
- The total CES-D scores ranged from 0 to 53, with possible scores of 0-60.
- The significant ethnicity by smoking status interaction indicated that the effect of smoking differ among the ethnicity groups presented in Table 2.

Table 2

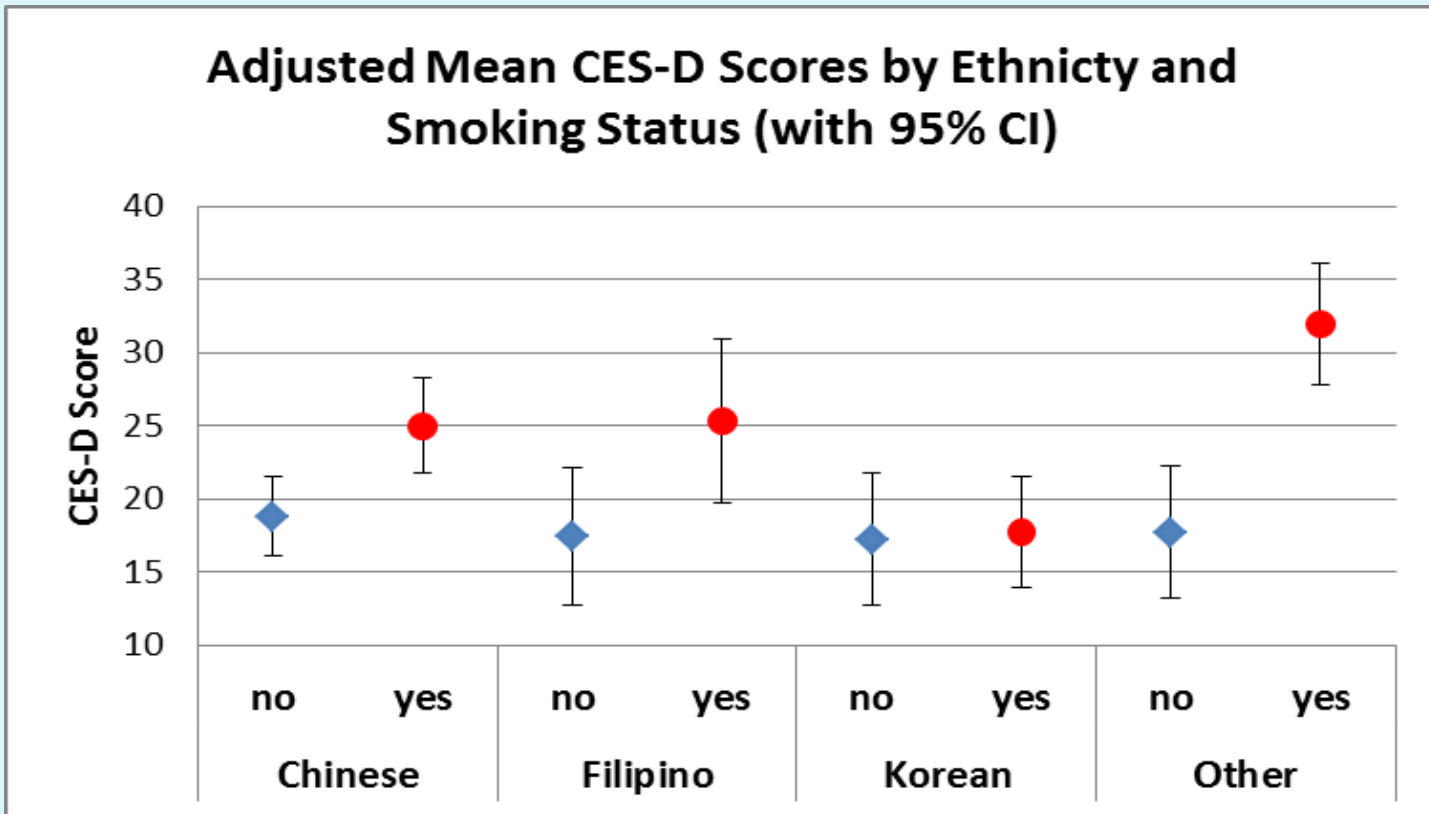
Ethnicity	CES-D Score	Low	High	Smoker
Chinese	18.78	16.06	21.50	No
Chinese	24.99	21.76	28.22	Yes
Filipino	17.46	12.73	22.18	No
Filipino	25.32	19.69	30.96	Yes
Korean	17.23	12.72	21.75	No
Korean	17.74	13.97	21.52	Yes
Other	17.73	13.26	22.20	No
Other	31.96	27.82	36.10	Yes

Depression Score is the adjusted mean CESD score // Low is the lower 95% CI limit /// High is the high 95% CI limit

Results (cont)

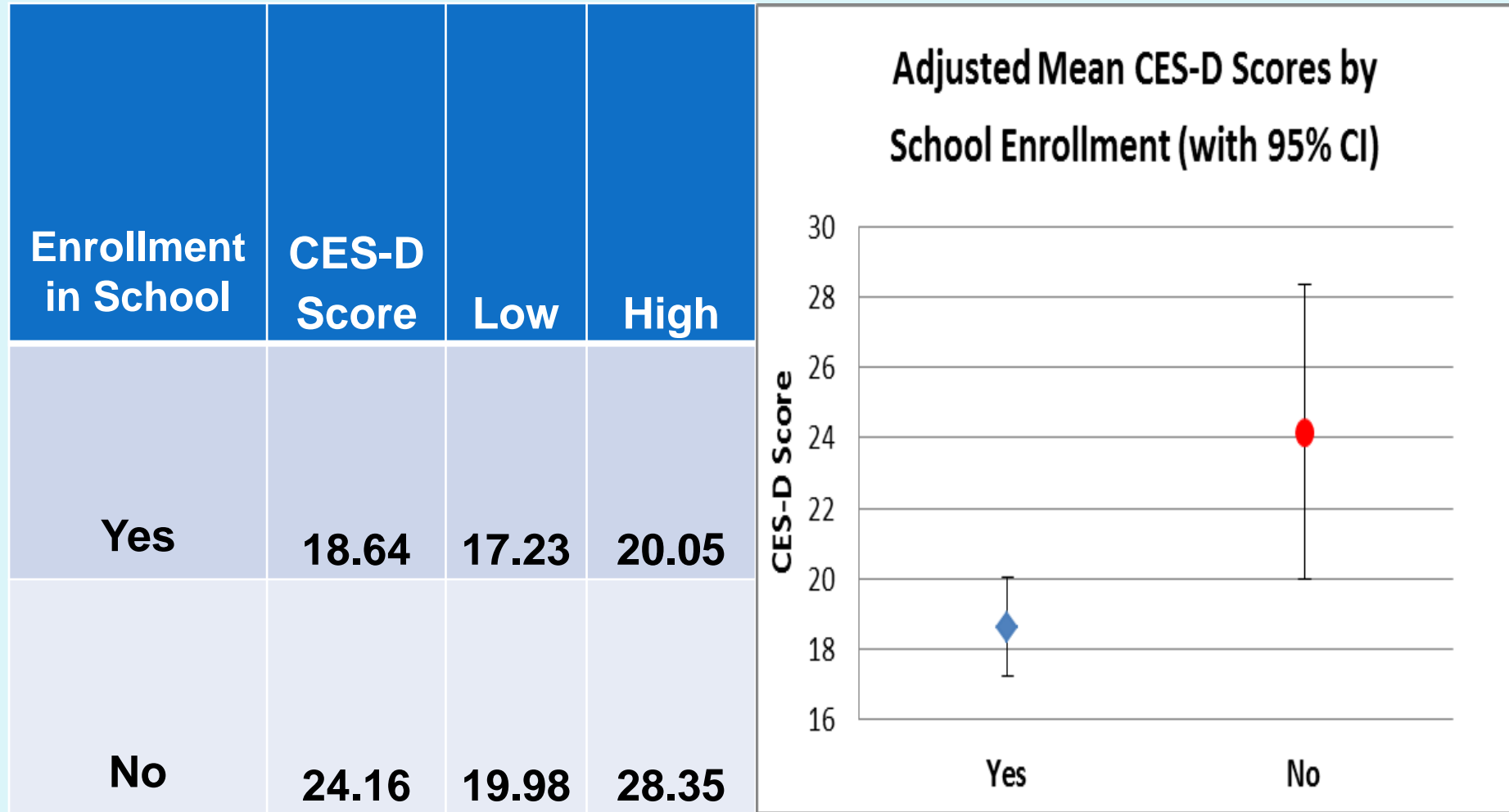
- English language acculturation, ethnicity, current enrollment in school and smoking status were found to be significant predictors, as well as the interaction between smoking status and ethnicity.
- The adjusted mean CES-D scores for each of the ethnicity by smoking status combinations are presented in Fig.1.
- Not being currently enrolled in school was associated with higher CES-D scores ($\beta = 5.52$, $p = 0.01$) as shown in Fig. 2.
- Further, lower acculturation index scores associate with higher CES-D scores ($\beta = -0.30$, $p = 0.006$).
- The linear regression model explained 21% of the variability in the CESD scores.

Figure 1



- Smoking status was associated with 6.2 increase in CES-D score in the Chinese group ($p = 0.009$), 7.9 units increase in the Filipino group ($p = 0.311$), 0.51 increase in the Korean group ($p = 1.000$) and 14.23 increase in Others group ($p < 0.0001$).

Figure 2



- Not being enrolled in school was associated with a 5.5 increase in CES-D score ($p = 0.013$).

Discussion

- Overall, it appears that less English language acculturation, ethnicity, not currently enrolled in school and smoking were the main correlates of depression in this sample—these variables accounted for 21% of the variance in depressive symptoms.
- Asian-American children and teenagers are considered highly prone to depression for the following reasons:
 - Pressure to succeed in school (Coalition for Asian-American Children and Families, 2001).
 - Adolescents who do not succeed academically bring shame to their parents (Lee, 1997).
 - Ethnic identity conflict, isolation, and acculturation stress (Kramer, Kwong, Lee, & Chung, 2002; Sue, 2002).
 - In a collectivistic culture, adolescents are encouraged to suppress socially disapproved behaviors and are prone to internalization (Greenberger, Chen, Tally, & Dong, 2000).

Discussion (cont)

- The study found significant differences in depressive symptoms among the different ethnic subgroups, not consistent with Wong (2001) and Rushton et al. (2002).
- Reasons may be features of the specific environments involved, or of changes in patterns of ethnic group immigration over time.
- Association between smoking and depression is explained by a reciprocal relationship between nicotine and negative mood—depression promotes the use of tobacco or that tobacco improves the dysphoric mood of a depressed person.
- The findings indicate that age, gender, arrival in the US before or after 7 years of age, school performance and parental education were not significantly associated with depression.
- These findings are thus important in helping identify Asian-American youth who may be at risk for depression.

Limitations

- A convenience sample was used, findings may not be generalizable to all Asian-American adolescents.
- Most participants were recruited through word of mouth—may have artificially elevated the sample's depression levels (depressed friends recruiting other depressed friends).
- This research was originally designed as a study of smoking behavior and have not assessed all relevant variables such as family relationships, intercultural and intergenerational conflicts, self esteem, and resiliency.
- Survey questionnaires were based on self-reports, exercise caution when interpreting such data.

Limitations (cont)

- Cultural bias may have influenced the participants' self-reports of depressive symptoms in a way that affected their CES-D scores.
- The sample in this study was overrepresented by Chinese-Americans ($n = 189$), reflective of the prevalence of Chinese-Americans in NYC, where they represent the largest Asian-American subgroup (45%).

Implications for Research

- Larger samples from the ethnic groups underrepresented in this study, along with longitudinal data, to enable stronger inferences.
- Further research is needed to investigate depressive symptomatology among Asian-American adolescents and use of the CES-D scale to measure depression in this population.
- Future studies should address whether the cut-off for depressive symptoms in the CES-D scale should be raised for Asians or Asian-Americans, or whether the questions should be reframed for this population.

Implications for Practice

- Health care professionals as well as educators should focus on helping Asian-American adolescents establish a balance between respecting traditional values and successfully integrating into the American culture.
- Efforts to develop culturally competent interventions to help Asian-American adolescents:
 - handle pressures to perform well in school
 - successfully manage the process of acculturation
 - minimize language barriers
 - family-focused interventions rather than individual interventions for adolescents
 - coalitions with ethnic communities and existing community services.

Implications for Practice (cont)

- Since smoking is a significant correlate of depression, smoking prevention programs that are culturally and ethnically sensitive to the needs of Asian-American adolescents are essential.
- Prevention programs should take the vulnerabilities of new immigrant youth into account.
- Parents, educators, and mental health professionals should be aware of the significant distress these adolescents often experience despite their attempts to do well in school (Lee & Ying, 2001).
- Not all Asian Americans are able to produce exceptional achievements.

Conclusion

- This study found that depressive symptoms are prevalent among Asian-American adolescents in NYC, posing a very significant health problem.
- Asian-American culture shapes the expression and recognition of mental health problems.
- Saving face—the ability to preserve the public appearance of the individual and family for the sake of community propriety—is extremely important to most Asian groups.
- Individuals may not be willing to discuss their moods or psychological states because of fears of social stigma and shame.
- The findings add valuable information on the mental well-being of Asian-American adolescents in New York City.

Thank You



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