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Social anxiety and mental health service use among Asian American high school students

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Abstract

Asian American adults endorse more symptoms of social anxiety (SA) on self-report measures than European Americans, but demonstrate lower prevalence rates of social anxiety disorder in epidemiological studies. These divergent results create ambiguity concerning the mental health needs of Asian Americans. The present study is the first to investigate this issue in adolescents through assessment of self-reported SA in Asian American high school students. Parent and self-ratings of impairment related to SA and self-reported mental health service use for SA were also measured. Asian American students endorsed a greater number of SA symptoms and scored in the clinical range more frequently than other ethnic groups. Also, Asian American and Latino students endorsed more school impairment related to SA than other ethnic groups. No differences in parent-reported impairment or service utilization were identified. Implications for future research and treatment for SA among Asian American adolescents are discussed.

Keywords

Asian American; Adolescents; Social Anxiety; School Screening

Social anxiety disorder affects approximately one in every seven adolescents and is associated with negative outcomes including depression, substance abuse, and impaired academic performance [1–5]. In addition, social anxiety (SA) often persists into adulthood when untreated [6]. Despite the availability of effective interventions, only about 12% of socially anxious adolescents receive mental health services [7–10]. These findings make SA among the most common yet untreated disorders in adolescents [3, 10].

Although there are many potential contributors to the disparity between the occurrence of SA and service use, detection of SA may be a main obstacle. Unlike adolescents with externalizing disorders, anxious youth remain largely undetected, likely because their impairment is not as readily observable. Given that academic settings provide unparalleled

access to youth and anxious adolescents often incur the most impairment at school, schools offer a natural setting to identify students suffering from SA [11, 12].

To enhance identification, proactive screening methods (e.g. self-report measures) have been used [13]. Although school screening is a valuable tool for identifying individuals with SA [8, 9], this strategy is questionable for Asian American adolescents. In cross-cultural studies validating the Multidimensional Anxiety Scale for Children (MASC) in normative samples of Chinese [14] and Taiwanese [15] youth, adolescents in east Asian countries either did not differ or reported less total anxiety, physical symptoms, and harm avoidance while scoring significantly higher on social anxiety subscales compared to American samples [14, 15]. Within the United States, Asian American young adults similarly endorse higher levels of SA than European Americans on self-rating instruments [16–18]. Yet despite higher self-reported SA, prevalence estimates of DSM-IV SA disorder, as well as other anxiety disorders, among Asian American adults are significantly lower than rates for other ethnic groups in the US according to national epidemiologic studies [21–24]. Further complicating these findings, Asian Americans seek mental healthcare at a lower rate than their European American counterparts [25, 26].

There are a number of potential explanations for the discrepancy between high self-reported SA and lower rates of diagnoses and service use. First, Asian Americans may experience SA more frequently than other ethnic groups, possibly due to factors such as socialized inhibition [20, 27] or racially motivated peer discrimination [28, 29]. While Black and Latino students report more institutional discrimination and discrimination from adults, Asian American adolescents report more harassment and discrimination from peers [30, 31]. Conversely, self-ratings of SA may misrepresent adherence to traditional Asian cultural values of interdependence, indirect expression, and interpersonal harmony [32] as impairment, thereby exaggerating rates of self-reported SA by identifying false positives [17, 33, 34]. It remains unclear whether symptom endorsement on self-report measures is associated with true distress and impairment.

To date, most research pertaining to SA among Asian Americans has utilized college students [19, 20] with no identified research with adolescents, the developmental period during which SA onset peaks and symptoms are most prevalent. Additionally, past research typically compared Asian Americans to the cultural majority (White/Caucasian) with a lack of other cultural minorities [17–20]. Finally, examinations of mental health service use often either assess attitudes toward service use or trans-diagnostic service use rather than use of services specifically for SA, with an exceptional dearth of data on Asian American adolescents [26, 35].

Purpose of Current Study

The purpose of the current study was to examine rates of self-reported SA symptoms among Asian American adolescents in an ethnically diverse sample of public high school students. This would clarify whether higher rates of self-reported social anxiety among Asian American adults also exist among adolescents, the most common age of onset for social anxiety. We hypothesized that Asian American adolescents would report more SA on self-

report measures and score above clinical cut offs at greater rates than students from other ethnic groups. A second aim was to better understand whether reports of SA reflect impairment in functioning. This was an exploratory goal and therefore there was not a hypothesized direction of effect. This was accomplished by using self and parent reports of impairment related to SA. Finally, we hypothesized that Asian American students would indicate lower rates of service use for SA than students in other ethnic groups.

Method

Participants

This study included 3,837 high school students in grades 9–12 and between the ages of 13 and 19 recruited from suburban middle to upper middle class schools. Participants were 51% male ($n = 1,961$), primarily in grades 9th or 10th (80%) and had a mean age of 14.91 ($SD = 0.83$).

Measures

Social anxiety measures

Multidimensional Anxiety Schedule for Children Social Anxiety subscale (MASC-Soc) [36]: The MASC is a 39 item inventory for anxiety. For the purpose of assessing SA and limiting participant burden, only the 9 items comprising the social anxiety subscale were administered. Participants rate each item based on a 4-point scale from 0 (Never true about me) to 3 (Often true about me), and the sum of those items yield a total subscale score. Possible scores range from 0 to 27, and cutoff scores of 14 for males and 16 for females are recommended to define scoring positive for SA. The MASC has demonstrated adequate test-retest reliability [36] and good internal consistency in this sample (Cronbach's $\alpha = .87$). See Table 1 for internal consistency by ethnicity and gender.

Social Phobia and Anxiety Inventory for Children (SPAI-C) [37]: The SPAI-C consists of 26 items that assess several characteristics of SA (e.g. somatic symptoms, cognitions, and avoidance and escape behaviors) across different social situations. Participants rate each item on a 3-point scale including 0 (Hardly Ever), 1 (Sometimes), and 2 (Most of the time) based on how often they agree with the statements. Responses are summed to create an overall score of SA that ranges from 0 to 52. A clinical cutoff of 18 and above is recommended. The SPAI-C has demonstrated good sensitivity for SA [38–40]. Internal consistency in this sample was strong (Cronbach's $\alpha = .95$). See Table 1 for internal consistency by ethnicity and gender.

Impairment

Parent-report of impairment: Parents were contacted by telephone to complete a brief, 15-minute telephone interview assess impairment related to SA. This labor-intensive method was chosen over other survey methods to provide a more stringent assessment of impairment using qualitative data from parents and to increase the likelihood of participation. The telephone screening included six questions about nervousness, shyness, or reluctance associated with: 1) unfamiliar people, 2) initiating conversations, 3) attending social events such as school clubs or parties, 4) inviting others to get together, 5) speaking up in class, and

6) interference with functioning. Cases were considered positive when parents endorsed children as having difficulty in at least one setting with associated impairment.

Adolescent Self-rated Impairment and Service Use (adapted from the Services for Children and Adolescents, Parent Interview [41]): This questionnaire consists of three categories of questions including, 1) Experiencing Discomfort in Social Situations, 2) Impairment Related to SA, and 3) Mental Health Service Use for SA. First, students indicate whether they are uncomfortable or shy in social situations. Then, students were asked to indicate the severity of impairment from SA across three domains (school, family and social life) on a 4-point scale from 0 (None) to 3 (A lot). Finally, students were asked if they sought or received mental health services for SA from any provider (e.g. school counselor, therapist, or rabbi or minister).

Procedure

All procedures were approved by the Institutional Board of Research Associates at the New York University School of Medicine (ref: S13-00040). Seven public, suburban high schools in the Northeast United States were invited to participate in a clinical trial evaluating an in-school intervention funded by the National Institute of Mental Health (NIMH; R01MH081881). Of the three schools that chose to participate, all students were invited to complete a school-wide screening of SA to determine eligibility. Parents and students were informed about the screening at least two weeks prior, and were able to opt-out by returning an information form to the school prior to the screening date. Of the 4,742 students invited to participate across three consecutive study years, 4,204 students (89%) completed the school screening. To reduce ambiguity in our sample, we excluded participants who did not report a gender ($n = 13$), did not report an ethnicity ($n = 93$), endorsed “more than one race” ($n = 169$), or endorsed “other ethnicity” ($n = 76$). Analyses also excluded individuals who endorsed being Hawaiian or Pacific Islander ($n = 8$) or American Indian/Native Alaskan ($n = 8$) due to the limited group sizes. Thus, the final sample included individuals who identified as Asian/Indian Subcontinent ($n = 209$), Latino/Hispanic ($n = 274$), White/Caucasian ($n = 3,257$), or Black/African American ($n = 97$).

School screening—Members of the research team administered research questionnaires in the classroom. All participants completed the MASC-Soc and SPAI-C. Scores on these measures had a strong correlation within the sample, $r = .78$, $p < .001$. Because these screening measures were validated using clinical samples, cut-off scores were lowered one point below the suggested score in order to maximize identification of individuals in the community sample who may benefit from intervention. Therefore, individuals who scored greater than or equal to a 17 on the SPAI-C and/or greater than or equal to 14 on the MASC-Soc were considered positive cases in this step of the screening ($n = 1,099$). See Figure 1, for a consort table indicating the number of individuals who progress through each stage of the screening by ethnicity.

The Adolescent Self-rated Impairment and Service Use questionnaire was only administered in the third year of the screening. Therefore, only a subset of the sample completed this

measure ($n = 1,441$), which included 75 Asian/Indian Subcontinent, 102 Latino/Hispanic, 1,222 White/Caucasian students, and 42 Black/African American.

Telephone screen—Members of the research team initiated telephone contact with parents of students who scored above adjusted clinical cutoffs on the MASC and/or the SPAI-C. Parents who agreed to participate in the telephone screening ($n = 739$) included 55 Asian/Indian Subcontinent, 62 Latino/Hispanic, 607 White/Caucasian and 15 Black/African American students. Parents who did not participate either refused to answer the screening questions or could not be reached by telephone after multiple attempts. No differences in rates of participation on the telephone screening existed between gender or ethnic groups. There were significant differences in MASC-Soc total scores between adolescents whose parents completed the phone screen ($M = 15.93$, $SD = 4.25$) and did not complete the phone screen ($M = 14.98$, $SD = 3.59$), $t(829.98) = -3.62$, $p < .001$, $d = .24$. Adolescent SPAI-C total scores were also significantly different between those with parents who completed the phone screen ($M = 20.81$, $SD = 6.95$) and did not complete the phone screen ($M = 18.77$, $SD = 6.34$), $t(773.39) = -4.86$, $p < .001$, $d = .31$.

Analyses

Preliminary analyses examined gender differences with respect to self-report (i.e. MASC-Soc, SPAI-C) scores and rates of positive screens on self- and parent-report measures to assess for potential interactions by gender, given previous findings that social anxiety is more prevalent in females [5]. We used t-tests for continuous outcomes and chi-squares and Fisher's exact test for categorical outcome variables. To test for group differences between ethnic groups on SA, we conducted one-way ANOVAs for the MASC-Soc and SPAI-C scores. To control for gender differences in self-report scores, analyses were split by gender and are presented separately because there was not homogeneity of variance between genders. We used Tukey post-hoc analyses to determine whether individual ethnic groups differed significantly from each other within genders. Logistic regression models (odds ratios with 95% confidence intervals) were conducted for rates of positive screens for SA on self-report measures, parent-endorsed impairment, adolescent endorsement of discomfort in social situations, self-reported impairment in specific contexts (school, family, social life), and service use across six ethnic comparisons: Asian Americans vs. Latino/Hispanic Americans, Asian Americans vs. White/Caucasian Americans, Asian Americans vs. Black/African Americans, Latino/Hispanic Americans vs. White/Caucasian Americans, Latino/Hispanic Americans vs. Black/African Americans, and White/Caucasian Americans vs. Black/African Americans. Statistical controls for gender were included in all models.

Results

Self-reported Social Anxiety

Means and standard deviations for MASC-Soc and SPAI-C results are presented in Table 1. Females scored significantly higher than males on the MASC-Soc, $t(3,790.61) = 15.82$, $p < .001$, $d = 0.51$, and on the SPAI-C $t(3,786.66) = 10.54$, $p < .001$, $d = 0.34$, therefore results for females and males are reported separately. There were significant ethnic differences with respect to self-reported SA among females participants on the MASC-Soc, $F(3, 1,868) =$

5.20, $p = .001$, $\eta^2 = .008$, and the SPAI-C, $F(3, 1,871) = 5.59$, $p = .001$, $\eta^2 = .009$. Asian females reporting significantly more SA than Black and White females on both measures accounted for these differences.

We also found significant ethnic differences for males on the MASC-Soc, $F(3, 1952) = 5.94$, $p < .001$, $\eta^2 = .009$, and the SPAI-C, $F(3, 1951) = 3.79$, $p = .01$, $\eta^2 = .006$. On the MASC-Soc, Asian males scored significantly higher than Black and White males, and Latino males scored significantly higher than Black males. Asian males reported significantly more SA than White males on the SPAI-C. No other ethnic groups differed significantly from each other within genders.

Positive Screen on Self-report Measures

Table 2 shows rates of positive screens on self-report measures and phone screens, and endorsed impairment across ethnic groups. Females also scored positively at greater rates than males on both the MASC-Soc, $\chi^2(1) = 112.70$, $p < .001$, Cramer's $V = .17$ and the SPAI-C $\chi^2(1) = 50.12$, $p < .001$, Cramer's $V = .11$. Controlling for gender, ethnic differences in positive self-report screens were found for the MASC-Soc, $\chi^2(3) = 19.19$, $p < .001$, and SPAI-C, $\chi^2(3) = 9.07$, $p = .028$ separately, as well as when evaluating screening rates for scoring positive on either measure $\chi^2(3) = 18.41$, $p < .001$ or both measures, $\chi^2(3) = 8.56$, $p = .036$. Adjusted ORs are presented in Table 3 for ethnic comparisons. Asian students scored positive at significantly greater rates than White and Black students on the MASC-Soc, SPAI-C, either measure, and both measures. Asian students also scored positive at greater rates than Latino students on the SPAI-C and either measure. Additionally, Latino adolescents scored positive on the MASC-Soc at significantly greater rates than White and Black students. White and Black students did not differ from each other on screening rates.

Social Anxiety Impairment

Parent-report of impairment—Parental reports of impairment did not differ by gender or ethnicity. Between 52% (White) and 65% (Latino) of parents believed that their child who screened positively on the self-report measures was impaired by SA in some domain of functioning. Parents of Asian students responded affirmatively at an intermediary rate of 58%.

Self-report of impairment—Females endorsed being uncomfortable in social situations at greater rates than males, $\chi^2(1) = 9.39$, $p = .002$, Cramer's $V = .081$. On the initial question regarding endorsement of feeling uncomfortable in social situations, Asian (67%) and Latino (62%) students endorsed being uncomfortable in social situations at significantly higher rates than White (51%) students, $\chi^2(3) = 11.72$, $p = .008$. No other ethnic group comparisons were significant on this item.

Females also endorsed more school impairment, $\chi^2(1) = 11.83$, $p = .001$, Cramer's $V = .09$, and social impairment, $\chi^2(1) = 4.097$, $p = .043$, Cramer's $V = .05$, than males. Asian (48%) and Latino (43%) students reported significantly higher rates of school impairment than White (34%) and Black (19%) students, $\chi^2(3) = 13.94$, $p = .003$. Asian students (21%) did not differ from any other ethnic group on rates of impairment in family functioning, but

Black (10%) students endorsed lower rates of impairment in family functioning than Latino (30%) and White (25%) students, $\chi^2(3) = 7.91, p = .048$. Overall ethnic differences in rates of reported impairment of social life were not significant.

Self-reported Service Use—Of the 1,441 students screened for service use, only 97 (6.7%) endorsed seeking any services for SA symptoms. There were no significant differences between the rates of Asian (5%), Black (0%), Latino (8%), and White (7%) students who endorsed receiving services.

Discussion

Consistent with previous research [5, 42], females reported more social anxiety than males, and these findings persisted across ethnicities. Asian American adolescents reported elevated levels of SA and scored in the clinical range more frequently than other ethnic groups. Although overall effect sizes for total MASC and SPAI-C scores were minimal, odds ratios for the rates at which Asian students screened positively compared to other ethnicities were larger. Asian Americans were between 1.53 and 1.83 times as likely as White students and between 1.89 and 3 times as likely as Black students to screen positively depending on the screening measure used (i.e. MASC-Soc, SPAI-C, both measures, or either measure). While Asian American students reported more SA than Blacks or Whites, they were more similar to Latino students. Effect sizes for total scores on self-report measures might not suggest meaningful differences between ethnicities, but when considering clinical cut-offs, Asian students' slightly elevated scores in relation to students of other ethnicities may increase the likelihood that Asian students will score in the clinically significant range and be identified by SA screening measures.

It is possible that discrimination from peers, which has been found to be more frequent in Asian Americans than other ethnic minorities [28, 29], may increase specific risk for SA. Another possibility is that the elevated social distress among Asian American high school students is related to discomfort in academic situations. Asian American and Latino students expressed more school impairment than White and Black students and reported generally higher levels of SA. Students with SA often report many challenges in the school setting such as presentations, group projects, speaking up in class, or approaching a teacher for help [43]. Asian American students may experience additional pressure in these situations potentially due to high familial expectations and perceptions that education affords social mobility to Asian American immigrants [44–47]. Previous research suggests that pressure to succeed academically and concern for the opinions of others may bring about more social-evaluative fears in Chinese adolescents [48].

While Asian American teenagers endorsed greater SA symptoms and school impairment, parent-reported impairment did not differ across groups. The lack of significant differences between parents of different ethnicities may have been influenced by only including the subsample of students who screened positive on the self-report measures. Additionally, parents who participated had children with significantly higher self-report scores than parents who chose not to participate. It remains unclear whether higher rates of Asian

American students would have been identified by screening the parents of all the students in the total sample.

Overall, consistent with previous literature [10, 11], very few students who indicated social distress reported seeking mental health services. Further, even though Asian Americans endorsed more distress, they did not receive help for SA more frequently than other ethnic groups. If self-ratings accurately represent functional impairment, it is possible that Asian American students are underserved. It is also possible that establishing culturally-sensitive instruments may help inform whether Asian Americans are in need of additional services, or rather, whether elevated scores are related to stigmatized cultural ideals.

Limitations and Future Directions

The current sample was collected to identify students who would benefit from treatment for SA in a clinical trial, and therefore used methodology that provided limited data to validate the SPAI-C or MASC-Soc as screening tools. For example, we did not collect parent reports of SA impairment for students who scored below clinical cutoffs on the initial screening to examine false negatives. A broader screening with parents may reveal differential rates of impairment that mirror self-reported SA symptoms. Further research should include multi-method assessments of SA among a community sample of Asian Americans to further validate the clinical significance of these screening measures and to determine whether different criteria levels should be utilized with Asian American adolescents. Ideally, a diagnostic interview would be utilized as a gold-standard to validate the significance of self-report measures of SA in this population.

A major limitation is that we have no data related to socioeconomic status (SES), immigration status, levels of acculturative stress, or enculturation of Asian values as these factors may moderate the association between cultural identity and the experience of mental health symptoms from anxiety to depression [33]. Elevated levels of acculturative stress in particular have been demonstrated as risk factors for a variety of mental health and academic issues in both Asian American and Latino American samples [33, 49, 50]. The current investigation also assumes homogeneity among Asian Americans who represent a diverse range of cultural, national, and religious backgrounds [51]. Future research regarding SA among Asian American adolescents should include more specific demographic questions about racial and cultural identity, and measures of acculturative stress to avoid pathologizing values of interdependence. Alternatively, if Asian Americans experience SA at a greater rate than other ethnic groups, extra attention should be given to potential vulnerabilities that might precipitate the development of SA. Pinpointing cultural predictors of SA would help treatment providers deliver more culturally-competent interventions for this potentially underserved population.

Summary

The current study investigated the rates of self-reported SA, related self and parent-rated impairment, and treatment use for SA in an ethnically diverse sample of adolescents. Participants were 3,837 high school students who participated in a school-wide screening for SA. This study demonstrates that elevated reports of SA symptoms among Asian Americans

are not limited to young adults, but also exist during adolescence. Asian American students also endorsed the most impairment at school, suggesting that social distress could be related to specific difficulties in the academic setting. Parental endorsement of adolescent SA was not different among ethnic groups. Treatment use was low across adolescents in this sample with no variations among ethnic groups. Future research should make efforts to examine SA and measures of cultural identity among Asian Americans adolescents to determine whether self-report measures are reflective of impairment or other cultural factors.

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Figure 1.
Screening Consort Table

Table 1**MASC-Soc and SPAI-C Scores by Gender and Ethnicity**

	Internal consistency			Screening Scores		
	Total	Females	Males	Total	Females	Males
	Alpha	Alpha	Alpha	M (SD)	M (SD)	M (SD)
MASC-Soc, Total	.87	.85	.86	8.96 (5.69)	10.40 (5.66)	7.58 (5.37)
Asian	.87	.87	.84	10.78 (5.87)	12.40 (5.88)	9.13 (5.41)
Latino	.88	.87	.88	9.38 (6.07)	10.53 (5.94)	8.40 (6.02)
White	.86	.85	.87	8.86 (5.63)	10.29 (5.59)	7.46 (5.32)
Black	.82	.87	.75	7.29 (5.39)	9.19 (6.22)	6.07 (4.43)
SPAI-C, Total	.95	.95	.95	11.00 (7.78)	12.33 (7.91)	9.72 (7.43)
Asian	.95	.95	.95	13.46 (8.30)	15.26 (8.47)	11.63 (7.74)
Latino	.96	.96	.96	11.65 (8.99)	12.86 (9.20)	10.63 (8.71)
White	.95	.95	.95	10.83 (7.63)	12.13 (7.74)	9.56 (7.31)
Black	.93	.94	.92	9.62 (6.62)	11.32 (7.29)	8.53 (5.95)

Note: MASC-Soc = Multidimensional Anxiety Schedule for Children Social Anxiety Subscale; SPAI-C = Social Phobia and Anxiety Inventory for Children

Table 2

Rates of Positive Self-Report Screens, Parent and Self-Report Impairment, and Service Use

Ethnicity	Asian	Latino	White	Black
	n (%)	n (%)	n (%)	n (%)
<i>Anxiety</i>				
MASC-Soc	65 (31.10)	71 (25.91)	678 (20.82)	12 (12.37)
SPAI-C	62 (29.67)	57 (20.80)	678 (20.82)	17 (17.53)
Either	86 (41.15)	84 (30.66)	908 (27.88)	21 (21.65)
Both	41 (19.62)	44 (16.06)	448 (13.75)	8 (8.25)
<i>Parent Report</i>				
Impairment	32 (58.18)	40 (64.52)	316 (52.06)	9 (60.00)
<i>Impairment</i>				
Social Disc.	50 (66.67)	63 (61.76)	621 (50.82)	22 (52.38)
School Imp.	36 (48.00)	44 (43.14)	410 (33.55)	8 (19.05)
Family Imp.	16 (21.33)	31 (30.39)	303 (24.80)	4 (9.52)
Social Imp.	41 (54.67)	49 (48.04)	575 (47.05)	13 (30.95)
<i>Service Use</i>				
SA Treatment	4 (5.33)	8 (7.92)	85 (7.05)	0 (0)

Note: MASC-Soc = Multidimensional Anxiety Schedule for Children Social Anxiety Subscale; SPAI-C = Social Phobia and Anxiety Inventory for Children; Either = Positive Screening on the MASC or the SPAI-C; Both = Positive screening on both the MASC-Soc and SPAI-C; Impairment = Parent endorsed impairment for phone screen interview; Social Disc. = Social Discomfort; School Imp. = School Impairment; Family Imp. = Family Impairment; Social Imp. = Social Impairment; Parent Imp. = Parent Impairment; SA Treatment = Treatment for Social Anxiety.

Adjusted odds ratios (OR) for ethnic group comparisons in rates of positive self-report screens, parent and self-report impairment, and service use

Table 3

Ethnicity	Asian vs. Latino		Asian vs. White		Asian vs. Black	
	OR (95% CI)	p-level	OR (95% CI)	p-level	OR (95% CI)	p-level
<i>Anxiety</i>						
MASC-Soc	1.26 (0.84–1.88)	ns	1.73 (1.27–2.36)	**	3.00 (1.52–5.93)	**
SPAI-C	1.59 (1.04–2.41)	*	1.61 (1.18–2.20)	**	1.89 (1.03–3.47)	*
Either	1.55 (1.06–2.28)	*	1.83 (1.37–2.45)	***	2.39 (1.36–4.20)	**
Both	1.24 (0.77–2.00)	ns	1.53 (1.07–2.19)	*	2.54 (1.13–5.68)	*
<i>Parent Report</i>						
Impairment	0.75 (0.36–1.59)	ns	1.29 (0.74–2.26)	ns	0.93 (0.29–2.98)	ns
<i>Impairment</i>						
Social Disc.	1.23 (0.66–2.29)	ns	1.96 (1.20–3.21)	**	1.79 (0.82–3.88)	ns
School Imp.	1.18 (0.65–2.16)	ns	1.85 (1.15–2.96)	*	3.60 (1.46–8.86)	**
Family Imp.	0.61 (0.31–1.23)	ns	0.82 (0.46–1.45)	ns	2.43 (0.75–7.83)	ns
Social Imp.	1.27 (0.70–2.32)	ns	1.36 (0.85–2.17)	ns	2.46 (1.10–5.50)	*
<i>Service Use</i>						
SA Treatment	0.65 (0.19–2.24)	ns	0.75 (0.27–2.10)	ns	—	—
<i>Latino vs. White</i>						
OR (95% CI)		p-level	Latino vs. Black		White vs. Black	
			OR (95% CI)	p-level	OR (95% CI)	p-level
<i>Anxiety</i>						
MASC-Soc	1.38 (1.03–1.84)	*	2.39 (1.22–4.67)	*	1.74 (0.94–3.22)	ns
SPAI-C	1.02 (0.75–1.38)	ns	1.19 (0.65–2.18)	ns	1.17 (0.69–2.00)	ns
Either	1.18 (0.90–1.55)	ns	1.54 (0.88–2.68)	ns	1.31 (0.80–2.15)	ns
Both	1.23 (0.88–1.73)	ns	2.04 (0.92–4.53)	ns	1.66 (0.80–3.45)	ns
<i>Parent Report</i>						
Impairment	1.72 (0.99–2.97)	ns	1.23 (0.39–3.93)	ns	0.72 (0.25–2.05)	ns
<i>Impairment</i>						
Social Disc.	1.60 (1.05–2.43)	*	1.46 (0.71–3.02)	ns	0.91 (0.49–1.69)	ns
School Imp.	1.56 (1.03–2.36)	*	3.04 (1.27–7.27)	*	1.95 (0.89–4.28)	ns

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Ethnicity	Asian vs. Latino		Asian vs. White		Asian vs. Black	
	OR (95% CI)	p-level	OR (95% CI)	p-level	OR (95% CI)	p-level
Family Imp.	1.34 (0.86–2.09)	ns	3.97 (1.30–12.12)	*	2.96 (1.05–8.39)	*
Social Imp.	1.07 (0.71–1.60)	ns	1.94 (0.90–4.18)	ns	1.82 (0.93–3.56)	ns
Service Use						
SA Treatment	1.16 (0.54–2.47)	ns	—	—	—	—

Note. MASC-Soc = Multidimensional Anxiety Schedule for Children Social Anxiety Subscale; SPAI-C = Social Phobia and Anxiety Inventory for Children; Either = Positive Screening on the MASC or the SPAI-C; Both = Positive screening on both the MASC-Soc and SPAI-C; Impairment = Parent endorsed impairment for phone screen interview; Social Disc. = Social Discomfort; School Imp. = School Impairment; Family Imp. = Family Impairment; Social Imp. = Social Impairment; Parent Imp. = Parent Impairment; SA Treatment = Treatment for Social Anxiety. Odds ratios are adjusted for gender. ns: not significant.

* p<.05,
** p<.01,
*** p<.001.
— No cases in cell.