

Perceived COVID-19-Related Discrimination and Anxiety Severity Among Asian Americans: The Moderating Role of Acculturation

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Abstract

Asian Americans (AAs) experienced heightened discrimination during the COVID-19 pandemic, yet less is known about how perceived discrimination relates to different levels of anxiety severity and how acculturation shapes this association. This study examined the relationship between COVID-19-related discrimination, anxiety severity, and acculturation among AA adults (N = 554). Adjusted multinomial and multivariable logistic regression analyses were conducted to assess these associations. Results indicated a significant dose-response relationship, with greater perceived discrimination associated with higher odds of more severe anxiety. Additionally, the interaction between acculturation and discrimination was significantly associated with the likelihood of moderate anxiety compared to minimal anxiety, as well as severe anxiety compared to both minimal and mild anxiety. These findings suggest that discrimination may have a stronger psychological impact among highly acculturated AAs. Implications and study limitations are discussed.

Introduction

Beginning in early 2020, Asian Americans (AAs) have faced a marked surge in race-based hate incidents across the United States, with over 11,000 cases recorded in the first two years of the pandemic alone (Stop AAPI Hate, 2022). These encounters ranged from verbal slurs and microaggressions to physical violence, contributing to a widespread erosion of safety and social belonging within AA communities. Many of these incidents reflect the broader rise in race-based discrimination during the COVID-19 pandemic.

A review of the extant body of research indicates that COVID-19-related racism was consistently associated with worse mental health outcomes, particularly anxiety and depression, among AAs during the pandemic. Prior research consistently linked both overt and covert forms of racial discrimination to heightened mental health risks, including anxiety, depressive symptoms, and overall psychological distress among Asian Americans (Lee & Waters, 2021; Litam & Oh, 2021; Oh et al., 2022; Tiwari & Zhang, 2022; Von Visger et al., 2025). Anxiety may be particularly exacerbated in this context because racialized threat heightens hypervigilance and anticipatory fear of future racialized harm. For example, a 2021 national survey reported only 50% of Asian American and Pacific Islander (AAPI) respondents felt safe in public, while 95% reported viewing the United States as a more dangerous environment (Stop AAPI Hate, 2022). Consistent with this pattern, nationally representative longitudinal evidence indicated Asian Americans experienced a disproportionate increase in self-reported depression and anxiety diagnoses from 2019 to 2020 (Lee & Howard, 2023; Von Visger et al., 2025).

The psychological impact of racial discrimination may vary by an individual's level of acculturation. Acculturation is a multidimensional process that encompasses behavioral adaptation, shifts in cognitive frameworks, and changes in value orientation toward the dominant culture (Berry, 1997; Miller, 2007). Recent research argues that acculturation in Asian American health research should be conceptualized as a multidimensional and context-dependent process rather than a simple linear shift toward the

dominant culture (Yi et al., 2025). Acculturation has been viewed both as a potential protective factor and a source of psychological strain. On one hand, acculturative status has been associated with better self-rated health, greater physical activity, and access to care (Ryu et al., 2023; Li et al., 2023). On the other, acculturation has been linked to adverse health consequences, such as greater odds of certain cardiovascular risk factors, depression, anxiety, psychological distress, and other internalized problems (Li et al., 2023; Tineo et al., 2024). Thus, acculturation appears to be a complex process that may enhance adaptation and access to resources in some contexts while also introducing stress, vulnerability, or health risk in others.

This complexity may be especially relevant when considering how racial discrimination affects mental health among AAs. Because Asian American communities are heterogeneous, the relationship between discrimination and mental health may vary not only across levels of acculturation but also across Asian subgroups. Recent pandemic-era evidence has shown meaningful subgroup differences in psychological distress among Asian Americans (Tiwari & Zhang, 2022), and broader research has emphasized that subgroup-specific social, cultural, and migration-related contexts are important for understanding health and mental health outcomes (Chan & Litam, 2021; Litam & Oh, 2022; Yi et al., 2025).

Accordingly, limited research has examined how perceived racial discrimination is associated with different levels of anxiety severity among AAs and whether acculturation moderates that relationship. Although recent studies and reviews support the relevance of subgroup heterogeneity, acculturation, and mental health vulnerability, fewer studies have focused specifically on anxiety severity as an outcome or tested whether acculturation alters the strength of the association between discrimination and anxiety. To address this gap, the present study investigates (a) the extent to which perceived COVID-19-related racial discrimination is associated with varying levels of anxiety severity among AAs and (b) the moderating role of acculturation in shaping the relationship between discrimination and anxiety symptoms.

Method

Study Design

A cross-sectional, correlational design was used for this study. Recruitment involved two primary methods: (a) outreach to AA communities across the Midwest, East Coast, and West Coast, and (b) through Amazon Mechanical Turk (MTurk). For outreach to AAPI communities, invitations were distributed via electronic announcements on listservs, within cultural organizations, on social media platforms (e.g., LinkedIn), in churches, and through AA cultural centers. MTurk was utilized to ensure geodemographic diversity, with participants receiving \$0.50 for completing the assessment. To enhance data quality, the MTurk assessment included three attention-check questions requiring specific responses (e.g., 'Please select 'Strongly Agree' for this item'). Approval from the university's Institutional Review Board (IRB) was obtained prior to data collection.

Data

Participants in this study were required to meet the following criteria: (a) self-identify as Asian American, (b) reside in the United States, and (c) have experienced or witnessed racial discrimination since the onset of the COVID-19 pandemic. A total of 861 participants were initially recruited through Asian American and Pacific Islander (AAPI) community listservs ($n = 536$) and Amazon Mechanical Turk (MTurk) ($n = 325$). Following data screening, a total of 307 cases were excluded from the final dataset for not meeting the inclusion criteria, missing responses to any item of the study variables, providing uniform responses across all items, or failing attention-check questions requiring specific responses. The final analytic sample comprised 554 Asian American participants, which aligned with general guidelines for sufficient sample size in logistic regression analysis (Bujang et al., 2018).

Measures

Demographics Questionnaire

A demographic questionnaire was created to collect participant information, including gender, ethnicity, age, and level of education. In addition, participants responded to survey items about their experiences with COVID-19-related racial discrimination, specifically whether they had personally experienced it, observed it happening to others, or both. Demographic variables, including gender, ethnicity, type of discrimination, age, and educational status, were controlled in all statistical analyses.

Everyday Discrimination Scale

The Everyday Discrimination Scale (EDS; Williams et al., 2003) was employed to evaluate the frequency of everyday discriminatory encounters. The EDS is a single-factor instrument comprising nine items, each rated on a 4-point Likert-type scale ranging from 0 (*never*) to 3 (*always*). Higher scores reflect greater exposure to discriminatory experiences. In this study, additional context-specific prompts were incorporated to capture discrimination related to the COVID-19 pandemic more accurately. For instance, participants were asked: "Many Asian American and Pacific Islanders have experienced increased rates of racial discrimination since the COVID-19 outbreak. How often have you personally experienced the following COVID-19-related forms of racial discrimination?". This modification was intended to focus on pandemic-specific experiences. In the present study, the EDS exhibited a strong reliability, with an internal consistency of $\alpha = .94$.

The Suinn-Lew Asian Self-Identity Acculturation

The Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA; Suinn et al., 1987; 1992) was utilized to evaluate levels of acculturation, ranging from low to high acculturation. The SL-ASIA is a 21-item instrument on a 5-point Likert-type scale to assess various facets of acculturation, such as language proficiency, cultural identity, friendship selection, generational or geographical background, and personal attitudes toward culture (Suinn et al., 1987; 1992). Total scores were calculated by summing responses across all items, which were then averaged by dividing by the total number of items, resulting in a final

acculturation score between 1 to 5 (Suinn et al., 1987; 1992). Higher scores on the SL-ASIA represent a stronger endorsement of acculturation (e.g., higher level of identification with the dominant culture), whereas lower scores suggest a weaker endorsement of acculturation (e.g., high Asian identification). In the present study, the SL-ASIA demonstrated good internal reliability, with a Cronbach's alpha of .84.

Beck Anxiety Inventory

The Beck Anxiety Inventory (BAI; Beck et al., 1988), a 21-item self-report measurement, was used in this study to assess the severity of anxiety symptoms. Participants rated how much they were affected by anxiety symptoms over the past month on a 4-point Likert-type scale ranging from 0 (*not at all*) to 3 (*severely—it bothered me a lot*). The total score was calculated by summing all 21 item responses, resulting in a range from 0 to 63. In this study, the total scores were categorized into four levels of anxiety severity based on the BAI cut-off scores (Beck et al., 1988): minimal (0 to 7), mild (8 to 15), moderate (16 to 25), and severe (26 or higher). The 21-item measure demonstrated strong internal reliability ($\alpha = .92$), and its test-retest reliability over one week was found to be $\alpha = .75$ (Beck et al., 1988). In the present study, the 21-item BAI demonstrated strong reliability ($\alpha = .94$).

Data Analysis

The analyses followed a three-stage approach. Initially, multinomial logistic regression models were employed to examine the relationship between independent variables and three levels of anxiety symptoms—mild, moderate, and severe—using minimal anxiety as the reference group. Next, another set of multinomial logistic regression models was run to evaluate associations between independent variables and moderate and severe anxiety, with mild anxiety as the reference group. Finally, multivariable logistic regression analyses were applied to estimate the association between independent variables and severe anxiety, using moderate anxiety as the reference group. This approach enables the identification of the independent variables that distinguish individuals across different levels of symptom severity. Statistical analyses were carried out using STATA version 18.0. Relative Risk Ratios (RRR) and Odds Ratios (OR), each with 95% Confidence Intervals, were reported from multinomial and multivariable logistic regression models, respectively. All analyses were controlled for the covariates, including gender, ethnicity, type of discrimination, age, and educational status.

Evaluation for multicollinearity showed no significant concerns, with all Variance Inflation Factor (VIF) values remaining well within acceptable parameters ($VIF < 10$, tolerance > 0.1 ; Kim, 2019). Model fit and discriminatory power were also evaluated, using the area under the receiver operating characteristic curve (AUC-ROC) for each anxiety severity level. Binary logistic regressions were performed for each level of anxiety (e.g., minimal vs. not minimal, mild vs. not mild, etc.), and AUC values were calculated. The AUC values ranged from 0.62 to 0.82 across severity levels, indicating acceptable to good model fit (Mandrekar, 2010). Specifically, the model achieved an AUC of 0.81 for minimal anxiety, 0.69 for mild anxiety, 0.62 for moderate anxiety, and 0.82 for severe anxiety.

Results

Characteristics of the Sample by Anxiety Symptoms

Table 1 presents the prevalence of individuals reporting different severity levels of anxiety symptoms within this Asian American sample. In our dataset, 341 AAs (61.55%) reported experiencing both direct and indirect COVID-19-related discrimination while 173 AAs (31.23%) reported only indirect discrimination, and 40 AAs (7.22%) reported only direct discrimination. Additionally, 215 AAs (38.81%) reported experiencing severe anxiety symptoms since the COVID-19 outbreak, with more than half of respondents identifying as men (60%). Approximately 70% of participants ($n = 152$) who reported severe anxiety symptoms experienced both direct and indirect discrimination since the COVID-19 outbreak.

Discrimination on Mild, Moderate, and Severe Anxiety Compared to Mild Anxiety

An incremental increase in the odds ratios for discrimination with higher levels of anxiety severity was present in the model without the interaction between discrimination and acculturation (Table 2). Discrimination alone was significantly associated with increased odds of experiencing mild (RRR = 1.08, 95% CI = 1.03–1.14), moderate (RRR = 1.14, 95% CI = 1.08–1.20), and severe anxiety symptoms (RRR = 1.28, 95% CI = 1.21–1.35), compared to minimal anxiety. In contrast, acculturation was not linked to the odds of any level of anxiety symptoms. In the model that includes the interaction term (Table 3), discrimination alone was not associated with any level of anxiety severity, but acculturation showed a significant association with mild anxiety symptoms (RRR = 0.42, 95% CI = 0.18–0.97). The interaction of discrimination and acculturation was significantly associated with both moderate (RRR = 1.10, 95% CI = 1.02–1.18) and severe anxiety symptoms (RRR = 1.14, 95% CI = 1.06–1.23).

Discrimination on Moderate and Severe Anxiety Compared to Mild Anxiety

The multinomial analysis without the interaction term indicated discrimination was significantly associated with higher odds of both moderate (RRR = 1.05, 95% CI = 1.01–1.09) and severe anxiety (RRR = 1.18, 95% CI = 1.13–1.22), compared to mild anxiety. Acculturation was significantly associated with moderate anxiety (RRR = 1.95, 95% CI = 1.22–3.10), but not with severe anxiety. The analysis including the interaction term (Table 4) showed that the interaction between discrimination and acculturation was significantly associated with higher odds of severe anxiety symptoms (RRR = 1.07, 95% CI = 1.01–1.14), but not with moderate anxiety. Neither discrimination nor acculturation alone was significantly associated with the odds of any level of anxiety severity.

Discrimination on Severe anxiety Compared to Moderate Anxiety

Logistic regression analysis without the interaction term indicated that when compared to moderate anxiety, discrimination was significantly associated with higher odds of severe anxiety (OR = 1.13, 95% CI = 1.08–1.18), while acculturation was significantly linked to lower odds of severe anxiety (OR = 0.55, 95% CI = 0.35–0.85). However, the subsequent analysis, including the interaction term, revealed that discrimination, acculturation, and their interaction were not significantly associated with severe anxiety symptoms.

Discussion

This study aimed to investigate the association between perceived COVID-19-related discrimination and varying severity levels of anxiety symptoms among Asian Americans (AAs), with a particular focus on the influence of acculturation. In our descriptive analysis, about 38% of AAs reported experiencing severe anxiety symptoms during the COVID-19 pandemic. This finding aligns with prior research reporting a 30% rise in severe anxiety among Asian and Pacific Islander college students between 2019 and 2020 (Zhou et al., 2023). Notably, approximately 60% of AAs who reported severe anxiety in our sample were men ($n = 129$ out of 215). This finding differs from existing literature, which often indicates that AA women report anxiety symptoms more frequently than AA men (Brice et al., 2015; Kramer et al., 2002). This difference underscores the ongoing need for nuanced mental health studies within AA communities, emphasizing the role of disaggregated data and subgroup-specific analyses to better understand the range of experiences within AA communities (Yi, 2024).

The findings from this study have three noteworthy implications for the impact of discrimination and the paradoxical role of acculturation in mental health within the AA population. First, our models without the interaction term indicated a potential dose-response relationship between the frequency of perceived discrimination and anxiety severity. In both models using minimal and mild anxiety as reference groups, the odds ratios (RRRs) for discrimination increased with greater anxiety severity (e.g., 1.08 for mild anxiety, 1.14 for moderate anxiety, and 1.28 compared to minimal anxiety; 1.05 for moderate and 1.18 for severe anxiety compared to mild anxiety). This pattern suggests that AAs who experience more discrimination encounters are at greater risk of reporting more severe anxiety.

Second, acculturation alone demonstrated severity-specific associations with anxiety, with its relationship varying by anxiety level. The models without the interaction term indicated that acculturation alone was associated with lower odds of severe anxiety ($OR = 0.55$) compared to moderate anxiety but was linked to higher odds of moderate anxiety ($RRR = 1.95$) compared to mild anxiety. This finding may suggest that acculturation alone may function as a risk factor for anxiety up to a certain threshold (e.g., up to moderate anxiety) but could help individuals manage anxiety before it escalates to severe levels. These severity-specific associations may be explained by the dual nature of acculturation (Abraído-Lanza et al., 2016; Berry, 1997; Lee et al., 2013; Saadi & Ponce, 2020; Torres et al., 2012), which presents both challenges and benefits that manifest differently across anxiety levels. According to positive theories of acculturation, greater integration into the dominant culture contributes to better health outcomes through greater access to socioeconomic and educational resources, improved understanding of the U.S. healthcare system, increased engagement in preventive practices, and strengthened social and community ties (Abraído-Lanza et al., 2016; Saadi & Ponce, 2020). In contrast, negative theories emphasize potential drawbacks, highlighting that acculturation can introduce acculturative stressors. This stress can stem from the need to balance differing cultural values, roles, expectations, confusion in one's self-concept (bicultural identity), and heightened exposure to and awareness of discrimination (Lee et al., 2013; Saadi & Ponce, 2020; Torres et al., 2012). In our study, AAs with higher acculturation may have experienced greater acculturative stress that elevated anxiety to

moderate levels, such as pressure to balance multiple cultural roles and merge their Asian identity with the dominant culture. However, the benefits of endorsing higher levels of acculturation, such as access to socioeconomic and educational resources, could aid in mitigating the potential for anxiety to reach severe levels. Further research is needed to clarify the severity-specific dynamics of this relationship and to examine whether similar patterns exist across other mental health outcomes.

Lastly, the interaction between acculturation and perceived discrimination significantly increased the likelihood of moderate anxiety compared to minimal anxiety as well as severe anxiety compared to both minimal and mild anxiety, suggesting that perceived discrimination may exert a stronger impact on highly acculturated AAs. These findings build upon two intersecting lines of prior research involving Asian Americans and immigrants: one emphasizing the positive relationship between acculturative stress and poor self-rated health (Lommel & Chen, 2016), and the other establishing the link between discrimination and poor mental health outcomes (Lee et al., 2013). Specifically, our study examined the relationship between discrimination and anxiety as influenced by acculturation and suggested that higher levels of acculturation may amplify the detrimental effects of discrimination on anxiety (Chau et al., 2018; Oh & Litam, 2022; Singh et al., 2017). Furthermore, our findings are consistent with prior research that reported how the relationship between perceived discrimination and adverse mental health outcomes was stronger among highly acculturated and younger adults (Saadi & Ponce, 2020).

One possible explanation for our findings lies in the interplay between heightened awareness of discrimination and elevated expectations of acceptance within the dominant culture, both of which often accompany higher levels of acculturation. As highly acculturated Asian Americans integrate more into U.S. society, they may develop a stronger identification with mainstream societal values and norms, fostering expectations of inclusion and acceptance. Simultaneously, increased interaction with diverse racial and ethnic groups may make them more attuned to systemic inequities and discriminatory practices (Abraído-Lanza et al., 2016; Saadi & Ponce, 2020), which aligns with the concept of the 'integration paradox.' This phenomenon posits that individuals who are more integrated into the host culture often report experiencing greater instances of discrimination compared to those who are less integrated (de Vroome et al., 2014; Schaeffer & Kas, 2024; Verkuyten, 2016). The tension between stronger identification with the dominant culture and greater awareness of discrimination may become more pronounced, especially following the COVID-19 pandemic, when anti-Asian hate and discrimination were prevalent. These discrimination experiences may have led to heightened feelings of exclusion, disillusionment, or perceived invalidation, thereby intensifying anxiety among highly acculturated AAs. In contrast, those with lower levels of acculturation may have attributed such encounters to unfamiliarity with American cultural norms, potentially mitigating the emotional impact of discrimination (Gee et al., 2006).

It is important to note that this association should not be interpreted as a unidirectional causal relationship from acculturation to discrimination, given the cross-sectional nature of our research design which precludes establishing causality. It is also possible that the observed interaction effect reflects a bidirectional relationship, where discrimination exacerbates acculturative stress, creating a feedback

loop that further intensifies anxiety symptoms. Future research is needed to clarify these associations and explore the potential bidirectional dynamics between acculturation and discrimination in shaping mental health outcomes.

Clinical Implications

The findings of this study have important implications for Asian American communities. Based on the potential dose-response relationship between the frequency of perceived discrimination instances and severity of anxiety, as well as the severity-specific associations of acculturation and mental health outcomes, it is of paramount importance that healthcare professionals explore these important cultural constructs within the therapeutic setting. Healthcare professionals are called to broach these cultural discussions by demonstrating curiosity about the extent to which individuals perceive that racial discrimination has occurred and exploring how experiencing or witnessing these instances may impact psychological distress and overall wellbeing.

Indeed, many Asian American communities continue to report higher levels of stigma toward professional mental health care (Martinez et al., 2020) and are less likely than other groups to pursue mental health services (Gong et al, 2003; Yang et al., 2020). Utilizing culturally responsive and trauma-informed approaches with Asian American individuals may increase treatment prognosis and retention by helping Asian American clients raise critical consciousness, embody compassion for self and others, and externalize feelings of shame (Litam, 2020; 2025). Healthcare professionals may also leverage ethnic identity to mitigate the extent to which acculturative stress and acculturation levels result in higher levels of anxiety. Indeed, ethnic identity has been identified as a protective factor among Asian Americans who face COVID-19-related racial discrimination (Litam & Oh, 2020; Oh et al., 2022). Healthcare professionals who do not consider the relationship between discrimination and acculturative stress on psychological well-being may overlook the extent to which these experiences result in culturally embedded experiences of anxiety, as well as, other mental health challenges.

Our finding that the interaction between acculturation and perceived discrimination significantly increased the likelihood of moderate anxiety additionally underscores important implications for healthcare treatment. Healthcare professionals, mental health counselors, and community leaders may consider strategies that strengthen ethnic identity among Asian American clients who face discrimination while engaging in discussions aimed at helping clients identify and leverage cultural capital. For instance, Asian Americans who endorse higher levels of acculturation may be invited to explore how their ability to integrate traditional and mainstream values evidences an important ability to discern social cues, cultivate diverse community ties, and achieve greater access to important resources. Conversely, Asian Americans who report lower levels of acculturation may benefit from discussions about how traditional and Indigenous Asian American values, such as maintaining interpersonal harmony and demonstrating resilience, can be leveraged in ways that buffer discrimination experiences. Questions such as, “How do individuals within your family of origin or community respond to stressful experiences?” “What are some traditional strategies you practice that help you feel well?”

and “How can traditional values be leveraged in ways that promote well-being?” can be used to guide explorations about psychological well-being among Asian American clients.

Limitations and Future Areas of Research

Several limitations of this study should be noted. First, the cross-sectional design restricts the ability to infer causal or directional relationships, as temporal links between discrimination, acculturation, and anxiety cannot be established. Second, the smaller cell sample size limits the examination of heterogeneity across subgroups within Asian communities, potentially obscuring variations in how discrimination and acculturation relate to anxiety. Additionally, the sample in our study is predominantly composed of Southeastern (Filipino and Vietnamese) and East Asian individuals (Chinese, Korean, and Japanese), which may not adequately represent the experiences of other Asian groups, such as South Asians, Southwest Asians, Central Asians, or Pacific Islanders. The self-report nature of the discrimination measure introduces the potential for measurement bias, as it may fail to capture the full complexity of discrimination experiences during the COVID-19 pandemic. Additionally, the measure focused on the frequency of daily discriminatory events but did not assess how participants experienced the intensity or severity of their psychological impact. Relatedly, this study centered on individual-level discrimination during COVID-19, without considering systemic or institutional forms of discrimination or lifetime exposure, which may occur concurrently and influence mental health outcomes. Future research should consider these multiple dimensions of discrimination to provide a more nuanced understanding of its effects. Finally, the 21-item acculturation measure employed in this study conceptualizes the acculturation process as linear, overlooking the multidimensional nature of acculturation. Acculturation is a complex phenomenon that involves factors such as economic and educational advancement, the structure of social networks, and dynamic interactions between an individual’s original and host cultures (Abraído-Lanza et al., 2016; Lee et al., 2013). Broadening the scope of acculturation measures to capture multiple societal and cultural dimensions could offer a more nuanced understanding of the relationships between discrimination, acculturation, and mental health outcomes among AAs.

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Tables

Table 1. Sociodemographic characteristics of Asian Americans ($N = 554$), stratified by anxiety severity.

	Minimal Anxiety (<i>n</i> = 84)		Mild Anxiety (<i>n</i> = 136)		Moderate Anxiety (<i>n</i> = 119)		Severe Anxiety (<i>n</i> = 215)		
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>P</i>
Gender									0.003
Men	32	11.59	61	22.10	54	19.57	129	46.74	
Women	52	18.91	74	26.91	63	22.91	86	31.27	
TGNC	0	0.00	1	33.33	2	66.67	0	0.00	
Self-reported ethnicity									0.190
Chinese	28	22.05	37	29.13	26	20.47	36	28.35	
Japanese	4	9.30	12	27.91	10	23.26	17	39.53	
Vietnamese	7	17.50	8	20.00	8	20.00	17	42.50	
Filipino	15	11.81	35	27.56	32	25.20	45	35.43	
Korean	15	16.13	16	17.20	19	20.43	43	46.24	
Others	15	12.10	28	22.58	24	19.35	57	45.97	
Age									0.06
18-25	12	9.45	41	32.28	23	18.11	51	40.16	
26-34	45	15.31	65	22.11	63	21.43	121	41.16	
35 or older	27	20.30	30	22.56	33	24.81	43	32.33	
Discrimination Type									< 0.001
Direct	8	20.00	5	12.50	8	20.00	19	47.50	
Indirect	37	21.39	56	32.37	36	20.81	44	25.43	
Both	39	11.44	75	21.99	75	21.99	152	44.57	
Education									0.001
High school	9	18.75	14	29.17	14	29.17	11	22.92	
College	37	11.60	71	22.26	61	19.12	150	47.02	
Master or Higher	38	20.32	51	27.27	44	23.53	54	28.88	

Note. TGNC = Transgender and gender nonconforming. Pearson Chi-square test was used to analyze sociodemographic differences across various severity levels of anxiety symptoms.

Table 2. Multinomial analyses of discrimination on mild, moderate, and severe anxiety, each as compared to minimal anxiety, without the interaction term.

	Mild (<i>n</i> = 136)		Moderate (<i>n</i> = 119)		Severe (<i>n</i> = 215)	
Variables	RRR	95% CI	RRR	95% CI	RRR	95% CI
Discrimination	1.08 ^{**}	1.03 - 1.14	1.14 ^{***}	1.08 - 1.20	1.28 ^{***}	1.21 - 1.35
Acculturation	0.65	0.38 - 1.10	1.34	0.78 - 2.30	0.80	0.46 - 1.38
Ethnicity (Ref. East Asian)						
Southeast	1.45	0.74 - 2.84	1.58	0.80 - 3.16	1.47	0.72 - 3.01
Other Parts of Asia	1.23	0.57 - 2.63	1.17	0.53 - 2.62	1.34	0.61 - 2.97
Age (Ref. 18-25)						
26-34	0.38 [*]	0.16 - 0.88	0.71	0.29 - 1.75	0.47	0.19 - 1.14
35 or older	0.31 ^{**}	0.13 - 0.74	0.70	0.28 - 1.78	0.32 [*]	0.12 - 0.82
Gender (Ref. Men)						
Women + TGNC	0.88	0.48 - 1.63	1.26	0.66 - 2.40	1.21	0.63 - 2.34
Discrimination Type (Ref. Experience)						
Witness	2.35	0.68 - 8.08	1.27	0.40 - 4.03	0.94	0.29 - 3.02
Both	2.12	0.61 - 7.29	1.16	0.37 - 3.64	0.62	0.20 - 1.93
Education (Ref. High school)						
College	1.55	0.56 - 4.29	0.84	0.30 - 2.33	2.07	0.66 - 6.46
Post-secondary	1.33	0.46 - 3.86	0.73	0.25 - 2.12	1.04	0.31 - 3.43

Note. All analyses controlled for gender, ethnicity, type of discrimination, age, and educational status.

*** $p < .001$, ** $p < .01$, * $p < .05$

Table 3. Multinomial analyses of the interaction effect of discrimination and acculturation on mild, moderate, and severe anxiety, each as compared to minimal anxiety, with the interaction term.

	Mild (<i>n</i> = 136)		Moderate (<i>n</i> = 119)		Severe (<i>n</i> = 215)	
Variables	RRR	95% CI	RRR	95% CI	RRR	95% CI
Discrimination	0.90	0.73 - 1.11	0.88	0.70 - 1.09	0.88	0.71 - 1.09
Acculturation	0.42*	0.18 - 0.97	0.60	0.23 - 1.53	0.16	0.05 - 0.48
Discrimination x Acculturation	1.06	0.99 - 1.14	1.10*	1.02 - 1.18	1.14**	1.06 - 1.23
Ethnicity (Ref. East Asian)						
Southeast	1.51	0.77 - 2.98	1.67	0.83 - 3.36	1.56	0.76 - 3.23
Other Parts of Asia	1.24	0.57 - 2.67	1.20	0.53 - 2.68	1.39	0.63 - 3.08
Age (Ref. 18-25)						
26-34	0.38*	0.16 - 0.88	0.71	0.29 - 1.76	0.47	0.19 - 1.16
35 or older	0.31**	0.13 - 0.75	0.71	0.28 - 1.82	0.32*	0.12 - 0.85
Gender (Ref. Men)						
Women + TGNC	0.88	0.47 - 1.62	1.25	0.65 - 2.40	1.22	0.63 - 2.36
Discrimination Type (Ref. Experience)						
Witness	2.40	0.69 - 8.27	1.30	0.41 - 4.18	0.92	0.28 - 2.98
Both	2.18	0.63 - 7.54	1.21	0.38 - 3.85	0.65	0.21 - 2.06
Education (Ref. High school)						
College	1.56	0.56 - 4.33	0.86	0.31 - 2.41	2.30	0.73 - 7.22
Post-secondary	1.36	0.47 - 3.96	0.77	0.26 - 2.23	1.15	0.34 - 3.82

Note. All analyses controlled for gender, ethnicity, type of discrimination, age, and educational status.

****p* < .001, ***p* < .01, **p* < .05

Table 4. Multinomial analyses for moderate and severe anxiety, each as compared to mild anxiety.

	Moderate (<i>n</i> = 119)		Severe (<i>n</i> = 215)	
Variables	RRR	95% CI	RRR	95% CI
Discrimination	0.97	0.81 - 1.14	0.96	0.82 - 1.13
Acculturation	1.35	0.56 - 3.26	0.36	0.13 - 1.00
Discrimination x Acculturation	1.03	0.97 - 1.09	1.07*	1.01 - 1.14
Ethnicity (Ref. East Asian)				
Southeast	1.06	0.58 - 1.94	1.10	0.61 - 2.00
Other Parts of Asia	0.94	0.48 - 1.87	1.18	0.62 - 2.22
Age (Ref. 18-25)				
26-34	1.91	0.95 - 3.85	1.27	0.67 - 2.40
35 or older	2.29*	1.06 - 4.96	1.05	0.50 - 2.23
Gender (Ref. Men)				
Women + TGNC	1.42	0.81- 2.50	1.43	0.82 - 2.49
Discrimination Type (Ref. Experience)				
Witness	0.57	0.17 - 1.97	0.40	0.12 - 1.32
Both	0.60	0.18 - 2.01	0.32	0.10 - 1.01
Education (Ref. High school)				
College	0.56	0.22 - 1.37	1.46	0.54 - 3.91
Post-secondary	0.56	0.21 - 1.49	0.84	0.29 - 2.41

Note. All analyses controlled for gender, ethnicity, type of discrimination, age, and educational status.

*** $p < .001$, ** $p < .01$, * $p < .05$