https://doi.org/10.24839/2325-7342.JN30.4.403

"Where Are You REALLY From?" Navigating Rejection Sensitivity, Perceiving Microaggressions, and Anxiety Among South Asian Students

Megha Datta[1], Zeena R. Whayeb[1], Pam McAuslan*[2], and Robert Hymes*[2]
[1]University of Michigan-Dearborn
[2]Department of Behavioral Sciences, University of Michigan-Dearborn

ABSTRACT. Three in four people of color experience discrimination within their daily lives (Wong-Padoongpatt et al., 2020). However, despite the well-known link between racial microaggressions and mental health, little is known about the impact of microaggressions on South Asian students, as existing studies frequently aggregate all Asian populations rather than distinguishing South Asians as a distinct subgroup (Ogunyemi et al., 2020; Torres-Harding et al., 2020; Wong-Padoongpatt et al., 2020). The present study examined the relationships between discrimination, rejection sensitivity, and emotional and physiological reactions among South Asian American students. Participants were 192 postsecondary students who completed an online 2-part longitudinal study. Participants completed self-report questionnaires and recorded their heart rate before and after viewing a video depicting discriminatory interactions with South Asian characters from popular shows and movies. Correlational analyses revealed that greater past discriminatory experience was related to greater rejection sensitivity, $r(190) = .61$, $p < .001$, and tendency to perceive the interactions in the video as microaggressive, $r(190) = .15$, $p = .032$. Further analyses revealed evidence that the relationship between past discriminatory experiences and emotional and physiological reactions (increase in heart rate and negative affect and decrease in positive affect) was serially mediated through rejection sensitivity and perception of microaggressions. Implications for future research and strategies involving stress management, conflict resolution, and multicultural training are discussed.

Keywords: South Asian, racial microaggressions, rejection sensitivity, health

Diversity badge earned for conducting research focusing on aspects of diversity.

Asian Americans are the fastest growing minority group in the United States; however, psychological research regarding the distinct experiences of South Asians within this broader category is relatively rare (Budiman & Ruiz, 2021). South Asians—composed of individuals from countries such as India, Pakistan, Bangladesh, Sri Lanka, and Nepal—remain underrepresented in empirical studies, particularly those examining the psychological and physiological consequences of discriminatory and microaggressive experiences. The "model minority" stereotype has further minimized issues experienced by South Asians such as discrimination, ethnic harassment, and racial profiling (Kaduvettoor-Davidson & Inman,

*Faculty mentor

2013). One particularly pervasive form of contemporary discrimination is racial microaggressions, which are subtle statements or actions that communicate derogatory or exclusionary messages towards marginalized groups (Lui, 2020). Although the harmful effects of discrimination and microaggressions on psychological and physiological health have been well-documented among other minority groups (Keels et al., 2017; Torres-Harding et al., 2020), limited research has examined how South Asians, and more specifically postsecondary South Asians, perceive and respond to these incidents—particularly when experienced vicariously in media. This study seeks to address this critical gap by investigating the relationship between past experiences with perceived discrimination, rejection sensitivity, emotional and physiological responses, and perceived microaggressions in media among South Asian postsecondary students.

Asian Americans and the Model Minority Theory

Individuals of Asian descent are a growing minority group within North America as families immigrate with the hopes of improving quality of life (Bakhtiari et al., 2018; Sharma et al., 2020). Individuals of Asian ethnicity represent 5.9% of the total population in the United States of America (U.S), with the total South Asian population estimated to be 5.4 million (SAALT, 2019). Despite this growth, studies sometimes neglect intracultural diversity, with Asian and Asian Americans often depicted as homogeneous, despite being composed of a variety of religious, ethnic, and linguistic backgrounds (Poolokasingham et al., 2014).

The model minority theory depicts individuals of Asian descent as industrious and accomplished minorities who have overcome racism and successfully integrated within American society (Kramer, 2003). The model minority theory is often promoted in media depicting Asian Americans as a representation of the "American Dream" compared to other people of color (POC; Kramer, 2003). The negative discriminatory experiences faced by South Asians are often diminished, possibly because they are perceived as a "model minority," and this stereotype often emphasizes success while minimizing issues such as discrimination, ethnic harassment, and racial profiling (Kaduvettoor-Davidson & Inman, 2013).

Despite this reputation of being a model minority, Asian Americans are thought to experience the same amount of discrimination as other minorities (Chan & Mendoza-Denton, 2008). More specifically, Ruiz et al. (2023) reported that six in ten Asian adults stated they have experienced discrimination. The United States Department of Justice (2024) released an analysis of reported crimes in 2023, revealing that 52.5% of hate crimes reported to police were motivated by bias against race/ethnicity/ancestry—6.7% of which were anti-Asian biases.

The repercussions of the model minority stereotype may extend into various settings, including postsecondary education. Although postsecondary education is frequently a stressful environment for young adults, mental health issues such as anxiety seem to occur more often among students of color and appear to relate to experiencing discrimination (Robinson-Perez et al., 2020). With the increasing diversity found among the student body in academia, findings by Solórzano and colleagues (2000; as cited by Ogunyemi et al., 2020) suggest that subtle microaggressions were more likely to be present within educational institutes compared to overt racism. Exposure to a racially hostile campus is depleting for students of color, increasing risk of stress, depression, binge drinking, and in some cases contributes to symptoms of posttraumatic stress disorder (PTSD; Ogunyemi et al., 2020).

Rejection Sensitivity

Rejection sensitivity refers to an individual's expectation or fear of potential rejection from others due to a particular bias (e.g., race, sexual orientation, status, gender; Mellin, 2008). Repeated experiences communicating rejection rather than acceptance, such as experiences of prejudice, discrimination, or exclusion based on social membership, can produce anxious expectations regarding the occurrence of future status-based rejection (Mendoza-Denton et al., 2002). Thus, different individuals may not appraise a discriminatory or microaggressive situation in the same way (McCullough et al., 2021; Wong-Padoongpatt et al., 2020). Various factors impact an individual's cognitive and emotional response to these experiences. These include gender and their overall level of rejection sensitivity, but also expectations regarding the exchange, the content or type of microaggression, location of the occurrence, or the perpetrator (i.e., role differences; Torres-Harding et al., 2020).

Rejection sensitivity is conceptualized as a defensive motivational system allowing individuals to provide a quick response to a potential rejection associated with an environmental stimulus. However, affective and behavioral overreactions can be a consequence, resulting in hypervigilance during ambiguous situations, causing individuals to readily perceive intentional rejection and potentially respond with anger, hostility, withdrawal, or other maladaptive coping to handle the exchange (Downey & Feldman, 1996; Henson et al., 2013; Mellin, 2008). Students with higher hypersensitivity or rejection sensitivity were more likely to partake in emotional mechanisms such as rumination (Henson et al., 2013).

Individuals tend to think about the situation over an extended period which prolongs the emotional and cognitive reactions associated with the experiences, thus leading to higher risk for depression, anxiety, anger, and stress (Downey & Feldman, 1996; Henson et al., 2013, Mellin, 2008). In summary, past repeated experiences with discrimination may increase anxious expectations of rejection in future situations, which may relate to how ambiguous events are interpreted and what emotional responses are elicited (Mendoza-Denton et al., 2002).

Racial Microaggression

The nature of racism is thought to have shifted to a more modern and subtle form that is referred to as microaggressions, which are ambiguous and often hard to identify forms of discrimination (Sue et al., 2007). Although discrimination towards racial minorities may manifest overtly through blatant physical violence or unjust treatment, Lui (2020) suggested that microaggressions differ from overt discrimination as they occur more frequently and place a significant psychological burden on recipients (Lui, 2020). Microaggressions are thought to stem from unconscious racism and may be directed towards any marginalized group including, but not limited to, gender, sexual orientation, or race (Lui, 2020; Lui & Quezada, 2019). They are characterized as brief, everyday exchanges which communicate hostile, offensive, or derogatory messages—whether intentional or not—directed towards individuals belonging to a racial minority (Ogunyemi et al., 2020; Torres-Harding et al., 2020).

Microaggressions often result in the marginalized individual experiencing psychological and physiological distress with a negative effect on social well-being (Pooloksingham et al., 2014; Sue et al., 2007). For example, one common microaggression experienced by Asian Americans and other minority groups is the question "Where are you really from?" which is rooted in the assumption that the person was not born in the United States (Sue, 2010). Furthermore, experiencing racial microaggressions from faculty and other peers is related to social, academic, and emotional challenges for students of color (Robinson-Perez et al., 2020). For example, Farber et al. (2021) found that non-White college students' experiences of microaggressions were associated with greater depressive and stress symptoms.

Individuals faced with the ambiguous nature of microaggressions undergo an arduous process as they must first determine whether the incident occurred, if the perpetrator consciously behaved in a discriminatory manner, and then decide on a sufficient response (Keels et al., 2017). This framework suggests that microaggressions may have stronger effects than overt racial discrimination, as individuals are affected even if they do not consciously recognize the fact that they have been a victim of a microaggression (Keels et al., 2017). Experiencing racial microaggressions results in an expenditure of significant emotional and cognitive energy and can lead to an increase in perceived stress, which negatively impacts the mental and physical health of minority students (Keels et al., 2017; Torres-Harding, 2020).

Microaggressions in Media

Microaggressions are visually present in many forms of media, including television. Prior research has used examples of microaggressions and discrimination from social media (Tao & Fisher, 2022) and American television shows (Mastro et al., 2008; Washington et al., 2021) to study the effects of witnessing similar others experiencing discrimination. There is a large body of research that demonstrates the complex effects of media on individuals (e.g., Valkenburg et al., 2016). For stigmatized groups, negative portrayals and cultural messages shown in media can foster prejudice, and are associated with negative health outcomes (National Academy of Medicine, 2017). For example, a study conducted by Roberts and colleagues (2017) recruited African American students to assess their reactions to descriptions of fatal shootings of African Americans and found that higher race-based rejection sensitivity and components of racial identity increased feelings of distress. Armstead and colleagues (1989) reported that African American participants experienced increases in blood pressure after viewing excerpts from popular movies that depicted racism directed at African American characters.

Viewing microaggressions or discrimination in the media has been recognized as a form of vicarious discrimination, which is the witnessing of racism targeting one's own racial or ethnic group (Verdugo et al., 2024). Studies show that vicarious discrimination, whether witnessed through social media or in-person, is related to poorer mental health (ElTohamy et al., 2024; Verdugo et al., 2024). Research during the COVID-19 pandemic provided evidence that the experience of vicarious discrimination associated with anti-Asian hate crime was related to increased anxiety and depressive symptoms in Asian Americans (e.g., Yi et al. 2023).

Psychophysiological Impacts of Discrimination

Prior research indicates that individuals born to immigrant families may experience difficulty being accepted as full members of society, with many South Asians perceived as foreigners despite being born or raised in America (Kaduvettoor-Davidson & Inman, 2013; Tineo et al., 2021). The minority stress theory suggests that the prejudice and discrimination faced by individuals

of racially marginalized groups results in elevated levels of stress (Wong-Padoongpatt et al., 2020), which may be predictive of internalizing symptoms associated with higher levels of anxiety. Furthermore, these experiences may lead to feelings of alienation, diminished participation in campus life, identity confusion, and increased levels of suicidality (Ogunyemi et al., 2020; Tineo et al., 2021). Additionally, discrimination is strongly related to trait and state anxiety (Hwang & Goto, 2009).

Few studies have examined anxiety among youth in relation to discrimination, despite the fact that an exchange or situation perceived as discriminatory can result in psychological stress responses (Clark et al., 1999; Stein et al., 2019). These responses include but are not limited to shame, anger, and anxiety which can impact physiological responses within the body (Clark et al., 1999; Stein et al., 2019).

Moreover, an individual's primary appraisal of a situation determines whether a situation is irrelevant, harmless, positive, or stressful, which can in turn result in various physiological responses (Clark et al., 1999; Ogunyemi et al., 2020). The minority stress theory states that prejudice and discrimination faced by individuals of racially marginalized groups can result in elevated levels of stress, which are often associated with a surge of the cardiovascular system commonly resulting in an increased heart rate and blood pressure, decreased heart rate variability, and a risk for cardiovascular disease (Clark et al., 1999; Hoggard et al., 2015; Wong-Padoongpatt et al., 2020). Despite the association of racial discrimination with negative health outcomes, there is little understanding of the mechanisms through which racial discrimination influences the changes in physiological systems and health outcomes (Hoggard et al., 2015).

The Present Study

Considering the psychological and physiological distress associated with experiencing microaggressions and the growing diversity of the student body in higher education (Ogunyemi et al., 2020), the present study sought to examine the relationships between past experiences of perceived racial discrimination, rejection sensitivity, microaggressions and emotional and physiological reactions among South Asian students. There were two parts to this longitudinal study: the first part examined past perceived discrimination and rejection sensitivity, and the second part used videos from popular shows and movies to examine the impact of watching a video depicting South Asian characters experiencing microaggressions on participants' mood and heart rate.

We anticipated that labelling the interactions in the video as microaggressive was expected to influence emotional and physiological reactions to the video. This hypothesis was based on the research that demonstrates that experiencing microaggressions is associated with negative psychological and physiological responses (e.g., Keels et al., 2017; Torres-Harding et al., 2020), as well as research that indicated that individuals who watch media portrayals of characters like them who experience discrimination also have elevated physiological and psychological responses (ElTohamy et al., 2024; Verdugo et al., 2024). Figure 1 depicts this hypothesized model.

We hypothesized that greater perceived past discrimination would relate to more rejection sensitivity and to increased heart rate and negative affect, as well as decreased positive affect after viewing the video. Rejection sensitivity was expected to be positively associated with identifying microaggressions in the video. Labelling the video as more microaggressive was expected to relate to subsequent increases in heart rate and negative affect and a decrease in positive affect after viewing the video. Rejection sensitivity and labelling the video as microaggressive were hypothesized to serially mediate the relationship between perceptions of past discrimination and emotional and physiological reactions to the video.

Methods

Participants

Participants were 192 students recruited from Amazon Mechanical Turk (MTurk). Participants ranged in age from 19 to 30 (M = 23.92; SD = 2.30); 108 self-identified as men (56.3%), 80 as women (41.7%), four identified as nonbinary or did not say (2.0%). Participants were postsecondary students in the United States who self-identified as South Asian Americans (53.1% Indian, 13.5 % Pakistani, 4.2% Bangladeshi, 14.1% Sri Lankan, 9.4% Nepali, 5.7% other), with the most born in the United States (93.8%).

Measures

Demographics

Demographics included questionnaires regarding eligibility (i.e., born or raised in North America, attending postsecondary school, and type or model of Apple Watch/Fitbit), age, gender, specific ethnic background (e.g., Indian, Pakistani). Participants were required to own an Apple Watch or Fitbit to be eligible for the study in order to measure heart rate. Most reported having an Apple Watch (69.3%) with the remainder being Fitbit users (30.7%).

Previous Discriminatory Experience

The Everyday Discrimination Scale (EDS), a 9-item self-report questionnaire, was used to assess

perceptions of the frequency of previous discriminatory experiences (Kershaw et al., 2016; Williams et al., 1997) by asking participants to report how often each item occurs to them in their day-to-day lives. Some example items include, "You are treated with less courtesy than other people are," and "You are treated with less respect than other people are" (Kershaw et al., 2016; Williams et al., 1977). Participants responded to each item using a six-point scale ranging from *never* (1) to *almost every day* (6). Strong reliability was indicated in past research (α = .88; Kershaw et al., 2016) and in the present study (α = .91).

Rejection Sensitivity

The Status-Based Rejection Sensitivity for Asian Americans (RS-A) was utilized to assess status-based rejection sensitivity (Chan & Mendoza-Denton, 2008). The 11-item self-report questionnaire describes situations in which Asian American students may experience discrimination due to their ethnicity or race. Some examples of the situations include, "One of your classmates who happens to be of the same ethnicity is having difficulty with a class assignment. You offer your help to the person," and "You are at a party, and you are introduced to a friend of a friend, who proceeds to ask you where you're from" (Chan & Mendoza-Denton, 2008). Participants responded to each item twice, first using a six-point scale ranging from *unconcerned* (1) to *very concerned* (6) to indicate their concern and anxiety regarding possible rejection, then indicating the likelihood of the other person engaging in a rejecting manner due to their race, with responses ranging from *very unlikely* (1) to *very likely* (6). Scores for each situation are obtained by multiplying the degree of anxiety with likelihood of rejection, then total scores were obtained. Past research indicates high reliability (α = .83; Chan & Mendoza-Denton, 2008). Through a technical error, one of the situations was not included. Alpha was .94.

Heart Rate

Heart rate (HR) was measured to assess the physiological response at baseline and after viewing the video. Participants were provided with instructions about how to use their Apple Watch or Fitbit to measure their heart rate before and after viewing the videos to assess any change in heart rate. Apple Watches have the strongest association with the Polar heart rate monitor (r = .59-.99), followed by Fitbit (r = .16-.99; Dooley et al., 2017). Baseline heart rate was controlled for in the analyses.

Mood

The Positive and Negative Affect Schedule (PANAS) was utilized to assess affect prior to and after viewing the video (Watson et al., 1998). The questionnaire consists of 10 items measuring positive affect (PA) and 10 items measuring negative affect (NA) with responses rated on a five-point scale, ranging from *very slightly or not at all* (1) to *extremely* (5). Examples of items used to assess PA were "Interested" and "Excited." Examples of items used to assess NA were "Guilty" and "Scared." Alpha in the present study was .92 for PA and .95 for NA during Time 1 (T1) and .93 for PA and .93 for NA during Time 2 (T2). Baseline affect was controlled for in analyses.

Post Video Reaction

The item "On a scale of one to five, with (1) being *not at all* and (5) being *very,* rate whether the media clip depicts racial microaggressions" was used for the purpose of analyses.

Materials

Diaphragmatic Breathing

Participants were provided with instructions for diaphragmatic breathing to be done for one minute to obtain an accurate baseline heart rate (see Appendix; Russell et al., 2014).

Video

We sought out examples of microaggressions targeting South Asian characters in popular media. However, based on the underrepresentation of prominent South Asian characters in Western media, options which clearly illustrated microaggressive incidents involving the South Asian character in a lead role or significant side role were quite limited. Following the selection process, a video montage of four scenes from popular TV shows and movies displaying various racial microaggressions directed at SA characters was created (see Table 3 for greater detail). A pilot study with 31 university students indicated that the montage with four scenes that included microaggressions were viewed as significantly more microaggressive than a montage of four scenes from the same popular TV shows and movies that depicted neutral interactions between the characters, $t(30) = -3.92$, $p < .001$, 95% CI [-4.09; -1.32]. The duration of the video was 3 minutes and 23 seconds with the mean length for each scene being approximately 50 seconds.

Procedure

The study was approved by the university Institutional Review Board prior to data collection. Participants were recruited via Amazon Mechanical Turk (MTurk) and completed screening questions to determine eligibility. Eligible participants were directed to a consent form outlining their rights and the purpose of the study. Participants created a unique ID at the beginning of

the T1 survey and were informed of the potential to participate in the T2 study. During T1, participants answered demographic questions and completed the RS-A and the EDS. The average time was 18 minutes and 39 seconds and participants were compensated $1.00.

Participants who successfully completed the T1 survey were contacted one week later through MTurk to invite participation in T2. After providing consent they were instructed to sit quietly in a room with minimal distractions to complete a brief diaphragmatic breathing exercise. Participants then measured and reported their baseline heart rate using their smartwatch and completed the PANAS. Next, participants were directed to the YouTube video. They measured and reported their heart rate and completed the PANAS a second time after viewing the video. Participants then responded to the postvideo questions to assess their attitudes towards the video. The average time for T2 was 12 minutes and 26 seconds. Participants were compensated $2.00.

Data Cleaning

After 103 participants were excluded because of failed attention checks or major inconsistencies in their survey responses, data were cleaned and checked for missing items and outliers. In total, 13 additional cases were excluded from analyses (10 were identified as multivariate outliers based on a regression analysis predicting T2 heart rate with all of the predictors; Tababchnick & Fidell, 2007), one provided blood pressure rather than heart rate, and two additional cases were removed because the reported heart rates that were outside of the plausible range (20–220-bpm based on Avram et al., 2019). There was no missing data for the variables included in the analyses.

Results

The means, standard deviations, and correlation coefficients for all study variables were considered (see Table 1). There was a large positive relationship between discrimination and rejection sensitivity, with individuals reporting more past racial discrimination tending to have higher levels of rejection sensitivity. Both greater discrimination and rejection sensitivity were associated with perceiving racial microaggressions in the video. Higher rejection sensitivity was significantly related to a greater T2 heart rate and negative affect but not T2 positive affect. The tendency to label the video as microaggressive was significantly related to higher T2 heart rate and negative affect and lower T2 positive affect.

Mediation Analyses

The primary analyses focused on whether the relationship between past discrimination and the emotional and physiological responses to the video were serially mediated through rejection sensitivity and the tendency to label the video as racially microaggressive, controlling for the relevant T1 emotional and physiological measures (see Figure 1).

Initial Mediation Analyses

Initially, a series of simple mediation analyses using Hayes' (2018) PROCESS macro Model 4, based on bootstrapping of 10,000 samples, was conducted to assess the simple mediation relationships between the variables prior to running the full serial mediation model. Specifically, we aimed to assess whether rejection sensitivity mediates the relationship between perceptions of past discrimination and labeling interactions in the videos as microaggressive? Further, we explored whether labeling the interactions

TABLE 1

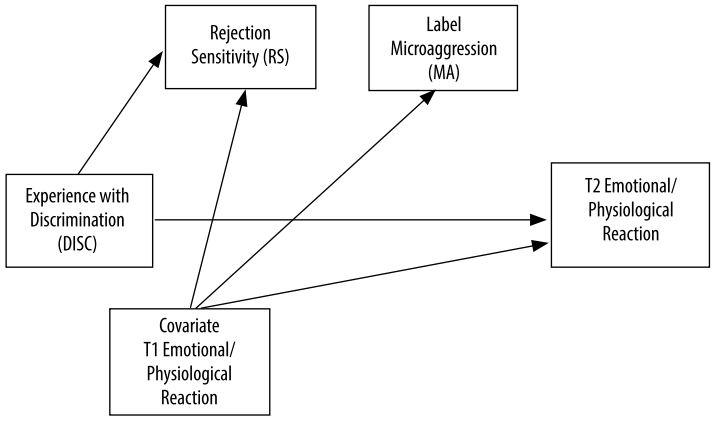
Descriptive Statistics (N = 192)

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Discrimination	2.84	1.08	-								
2. Rejection Sensitivity	12.58	6.02	.61***	-							
3. Microaggression Label	3.16	1.19	.15*	.22**	-						
4. T1 Heart Rate	77.03	13.60	.23**	.15*	.07	-					
5. T2 Heart Rate	80.76	14.36	.27***	.22**	.24***	.82***	-				
6. T1 Positive Affect	3.13	0.95	-.18*	-.11	-.13	.06	.00	-			
7. T2 Positive Affect	2.90	1.01	-.11	-.07	-.26***	.07	-.04	.79***	-		
8. T1 Negative Affect	1.69	0.91	.28***	.30***	.06	.18*	.13	.01	.06	-	
9. T2 Negative Affect	1.88	0.91	.28***	.34***	.24***	.18*	.21**	.08	-.04	.81***	-

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

FIGURE 1

Discrimination to Response: Serial Mediation Model



Note. Hypothesized serial mediation relationship between previous discriminatory experience and T2 emotional/physiological responses to video through rejection sensitivity and labelling as microaggressive, controlling for baseline (T1) emotional/physiological responses.

in the video as microaggressive mediates the relationship between rejection sensitivity and the emotional and physiological reactions (i.e., T2HR, T2PA, T2NA) when controlling for T1 emotional and physiological reactions (i.e., T1HR, T1PA, T1NA)?

The first analysis examined the possible mediating effect of rejection sensitivity on the relationship between perceptions of past discrimination and labeling the video as microaggressive. There was a significant effect from perceptions of past discrimination to rejection sensitivity (b = 3.40; SE = .32; p < .001), but the effect of discrimination to labeling the video as microaggressive was not significant (b = 0.03; SE = .10; p = .718). The path from rejection sensitivity to labeling the video as microaggressive was significant (b = 0.04; SE = .02; p = .027). The effect of perceptions of past discrimination on labeling the interactions in the video as microaggressive was mediated through rejection sensitivity (b = 0.13; SE = .06; LLCI = .03; ULCI = .25), such that greater perceived past discrimination was related to higher levels of rejection sensitivity which related to a greater likelihood of labeling the interactions as microaggressive.

The next set of analyses examined the possible mediation effect of labeling the interactions in the video as microaggressive on the relationship between rejection sensitivity and T2 emotional and physiological reactions, while controlling for the relevant T1 emotional and physiological reaction. First, we examined the possible mediation of labeling the interactions in the video as microaggressive on the relationship between rejection sensitivity and T2 heart rate, controlling for T1 heart rate (RS→MA→T2HR). There was a significant effect from rejection sensitivity to labeling the interactions in the video as microaggressive (b = 0.04; SE = .01; p = .003) but no significant effect from rejection sensitivity to T2 heart rate (b = 0.15; SE = .10; p = .113). There was a significant effect from labeling the interactions as microaggressive to T2 heart rate when controlling for T1 heart rate (b = 2.09; SE = .49; p < .001). The effect of rejection sensitivity on T2 heart rate (controlling for T1 heart rate) was mediated by labeling the interactions in the video as microaggressive (b = 0.09; SE = .04; LLCI = .03; ULCI = .16).

Similar analyses were conducted to understand these relationships for positive and negative affect. For RS→MA→T2PA (controlling for T1PA), there was a significant effect from rejection sensitivity to labeling the interactions in the video as microaggressive (b = 0.04; SE = .01; p = .004) but no significant effect from rejection sensitivity to T2PA (b = 0.01; SE = .01; p = .261). There was a significant effect from labeling the interactions as microaggressive to T2PA when controlling for T1PA (b = -0.14; SE = .04; p < .001). The effect of rejection sensitivity on T2PA (controlling for T1PA) was mediated by labeling the interactions in the video as microaggressive (b = -0.01; SE = .00; LLCI = -.01; ULCI = -.002).

For RS→MA→T2NA (controlling for T1NA), there was a significant effect from rejection sensitivity to labeling the interactions in the video as microaggressive (b = 0.04; SE = .01; p = .003) but no significant effect from rejection sensitivity to T2NA (b = 0.01; SE = .01;

TABLE 2

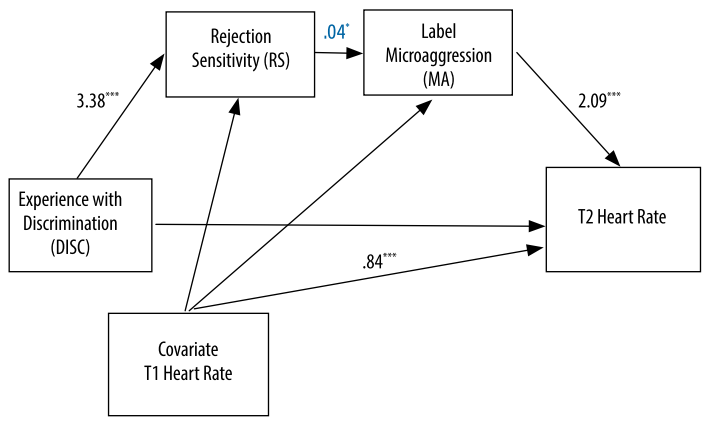
Indirect Effects of Previous Experiences of Discrimination on Reactions to Video Through Rejection Sensitivity and Labeling Microaggressions

	effect	se	95%CI
1. INDIRECT EFFECT: DISC→RS→MA→T2HR (T1HR AS COVARIATE)			
DISC–RS–HR	.34	.46	-.56 to 1.46
DISC–MA–HR	.06	.21	-.36 to .51
DISC–RS–MA–HR	.28	.14	.04 to .59*
2. INDIRECT EFFECT: DISC→RS→MA→T2 PA (T1PA AS COVARIATE)			
DISC-RS-PA	.02	.03	-.04 to .06
DISC-MA-PA	.00	.01	-.03 to .03
DISC-RS-MA-PA	-.02	.01	-.04 to -.01*
3. INDIRECT EFFECT: DISC→RS→MA→T2NA (T1NA AS COVARIATE)			
DISC-RS-NA	.03	.02	-.01 to .08
DISC-MA-NA	.00	.01	-.02 to .04
DISC-RS-MA-NA	.02	.01	.01 to .04*

Note. DISC = discrimination. HR = heart rate. PA = positive affect. NA = negative affect. RS = rejection sensitivity. MA = microaggresive. * CI does not contain 0 indicating a significant path

FIGURE 2

Discrimination to Response: Serial Mediation Model



Note. Serial Mediation: DISC → RS →MA →T2HR controlling for T1HR. Only significant paths indicated in the model; ***p < .001; **p < .01, *p < .05

$p = .114$). There was a significant effect from labeling the interactions as microaggressive to T2NA when controlling for T1NA ($b = 0.14$; $SE = .03$; $p < .001$). The effect of rejection sensitivity on T2NA (controlling for T1NA) was partially mediated by labeling the interactions in the video as microaggressive ($b = 0.01$; $SE = .00$; LLCI = .002; ULCI = .012).

The simple mediation analyses described in this section provided support for each of the hypothesized paths in the model depicted in Figure 1. The next step involved conducting serial mediation analyses.

Serial Mediation Analyses

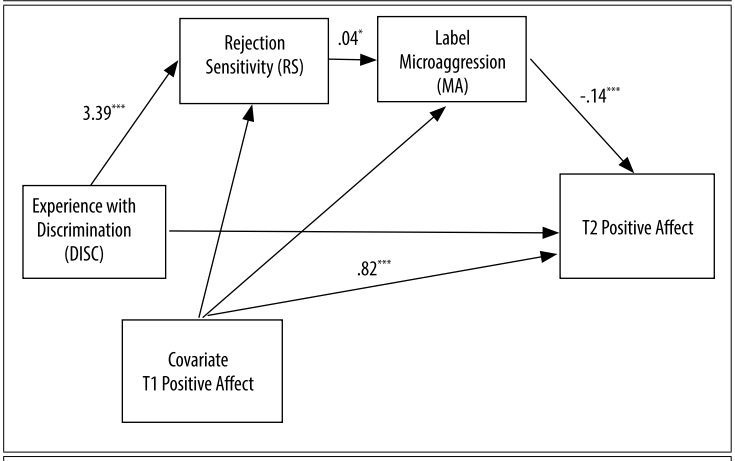
Next, three serial mediation models were considered using Hayes' Model 6 in the PROCESS macro, based on bootstrapping of 10,000 samples. For heart rate, the direct effect of perceived past racial discrimination on T2HR (controlling for T1HR) was not significant ($b = 0.51$; $SE = .67$; $p = .447$). However, the total effect of perceived discrimination on T2HR through the indirect effects of rejection sensitivity and labeling the interactions in the video as microaggressive was significant ($b = 1.19$; $SE = .56$; $p = .036$). The effect of discrimination on T2HR is serially mediated through rejection sensitivity and labeling the interactions in the video as microaggressive with more discrimination related to more rejection sensitivity, which related to a greater tendency to label the video as microaggressive, which related to a higher heart rate after viewing the video when controlling for T1 heart rate. The other possible mediating paths were not statistically significant (i.e., DISC→RS→T2HR; DISC→MA→T2HR; see Table 2 and Figure 2).

For positive affect, the direct effect of perceptions of past racial discrimination on T2PA (controlling for T1PA) was not significant ($b = 0.03$; $SE = .05$; $p = .578$) nor was the total effect of discrimination on T2PA through the indirect effects of rejection sensitivity and labeling the interactions in the video as microaggressive ($b = 0.03$; $SE = .04$; $p = .547$). However, there was evidence that the relationship between discrimination and T2PA is serially mediated through rejection sensitivity and labeling the interactions in the video as microaggressive with more discrimination related to more rejection sensitivity, which related to a greater tendency to label the video as microaggressive, which related to less positive affect after viewing the video when controlling for T1 positive affect . Again, the other possible mediating paths were not statistically significant. See Table 2 and Figure 3.

Finally, a similar pattern was found for negative affect. The direct effect of discrimination on T2NA (controlling for T1NA) was not significant ($b = -0.01$; $SE = .04$; $p = .921$) nor was the total effect of discrimination on T2NA through the indirect effects of rejection sensitivity and labeling the interactions in the video as microaggressive ($b = 0.03$; $SE = .04$; $p = .547$). However, as was the case for positive affect, there was evidence that the relationship between discrimination and T2NA is serially mediated through rejection sensitivity and labeling the interactions in the video as microaggressive with greater discrimination related to higher rejection sensitivity, which related to a greater tendency to label the video as microaggressive, which related to more negative affect when controlling for T1 negative affect. The other possible mediating paths were not statistically significant. See Table 2 and Figure 4.

FIGURE 3

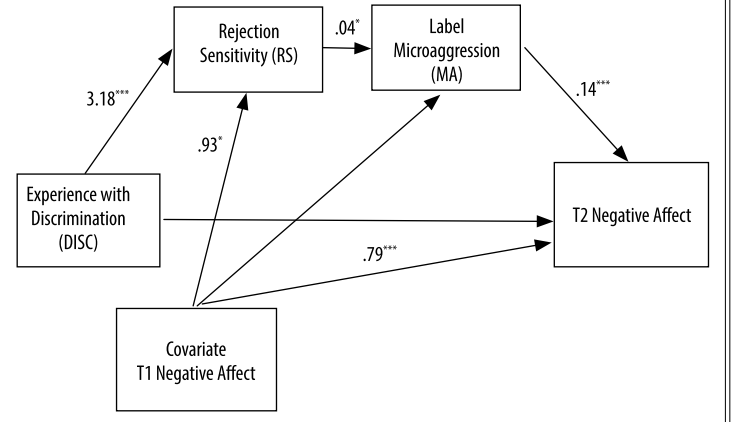
Serial Mediation of Discrimination Effects on Positive Affect



Note. Serial Mediation: DISC → RS → MA → T2PA controlling for T1PA. Only significant paths indicated in the model; ***$p < .001$; **$p < .01$, *$p < .05$

FIGURE 4

Serial Mediation of Discrimination Effects on Negative Affect



Note. Serial Mediation: DISC → RS → MA → T2NA controlling for T1NA. Only significant paths indicated in the model; ***$p < .001$; **$p < .01$, *$p < .05$

Discussion

Studies have shown that three in four POC experience discrimination within their daily lives (Wong-Padoongpatt et al, 2020). Despite research focusing on the link between racial microaggressions and health, the impact of microaggressions on South Asians has received little attention (Ogunyemi et al., 2020). This study addresses this gap by examining the relationship between perceptions of past discrimination, racially based rejection sensitivity, and emotional and physiological responses of South Asian American postsecondary students to viewing scenes from popular media that depicted microaggressions directed at South Asian characters.

Individuals who perceived greater prior discrimination and those with higher levels of rejection sensitivity tended to label the interactions in videos as more microaggressive, which was related to their emotional and physiological responses following the video.

There was strong evidence for the serial mediation model presented in Figure 1. Specifically, the effect of perceived discrimination on T2 heart rate (controlling for T1 heart rate) was serially mediated through rejection sensitivity and labeling the interactions in the video as microaggressive. Similarly, the hypothesized serial mediation pathways from perceived past racial discrimination through rejection sensitivity through labeling the video as microaggressive to increased negative affect and decreased positive affect were both significant. The results suggest that perceiving greater past racial discrimination relates to higher levels of status-based rejection sensitivity which primes individuals to see the interactions in the video as microaggressive, which relates to an increase in heart rate and negative affect and a decrease in positive affect.

This is consistent with research suggesting that experiencing microaggressions can lead to psychological and physiological responses associated with stress, negatively impacting mental and physical health (Torres-Harding, 2020). As mentioned earlier, frequent encounters with discrimination can lead individuals to develop hypervigilance, causing them to interpret situations as intentional acts of rejection (Downey & Feldman, 1996; Mellin, 2008; Mendoza-Denton et al., 2002). In the present study, individuals who reported higher levels of racially based rejection sensitivity were more likely to identify the interactions in the video as microaggressive and this subsequently influenced their emotional and physiological responses to the video.

These findings are also consistent with research that shows experiencing vicarious discrimination, whether in-person or through the media, is related to increased distress and negative health outcomes (e.g., National Academy of Medicine, 2017; Roberts et al., 2017). It is important to consider the content of the videos used in the present study which depicted mild microaggressive incidents targeting South Asian characters from popular media. Many of the young adults who participated in this study were likely familiar with these TV shows and movies. Thus, some may have perceived the microaggressive interactions as entertainment rather than discriminatory. However, for individuals who are primed to see rejection in racial situations (i.e., those high in rejection sensitivity), even the "mild" microaggressive interactions depicted in the video appeared were related to heart rate and affect.

The fact that we found evidence of the hypothesized serial mediation when using relatively mild examples of microaggressions is critically important as these are the types of events that participants likely encounter daily. Individuals who have experienced discrimination are primed for anxious expectations, making it more likely that they identify microaggressions in their daily life—in the media they consume and in their interactions—which was related to increased heart rate and negative affect and decreased positive affect. In the present study, it's possible that merely viewing these mild microaggressive interactions triggered participants to recall their own past negative encounters and contributed to the emotional and physiological response.

In addition, seeing media depictions of microaggressive or discriminatory acts directed at South Asians, whether in popular TV shows, movies, or in the local news, is common. Studies have shown individuals can experience negative consequences associated with observing discriminatory interactions, such as subtle

TABLE 3

Descriptions of Video Clips Depicting Microaggressive Interactions Targeting South Asian Characters

Show/Movie Name	Description	URL
The Office Episode: *Email Surveillance* (Season 2, Episode 9)	Micheel is upset that the IT specialist, Sadiq, was given an invitation to Jim's BBQ over him.	Starting at 0:00 https://www.youtube.com/watch?v=j67vMy2D9d0
Bend it like Beckham	While Jazz is at Juliette's house, Juliette's mom enters a discussion with Jazz about her name, culture, and arranged marriages	Starting at 0:35 https://www.youtube.com/watch?v=j67vMy2D9d0
Parks and Recreation Episode: *The Stakeout* (Season 2, Episode 2)	Leslie questions where Tom is from. Not satisfied with the answer, Leslie rephrases her question and asks Tom where he lived prior to North Carolina.	Starting at 1:51 https://www.youtube.com/watch?v=j67vMy2D9d0
Harold and Kumar Escape from Guantanamo Bay	While Harold and Kumar are seated in their plane, a fellow passenger is seen to be looking at Kumar in a suspicious manner.	Starting at 2:41 https://www.youtube.com/watch?v=j67vMy2D9d0

microaggressions seen in media (Ozier et al., 2019). Thus, it is very likely that South Asian young adults, particularly those who are primed to anticipate status-based rejection based on their past experiences with discrimination, may be at risk for regularly experiencing the emotional and physiological responses assessed in this study. These experiences can strain social relationships, compromise the students' sense of belonging at the educational institution, and result in greater symptoms of depression and anxiety (Mendoza-Denton et al., 2002; Torres-Harding et al., 2020).

Strengths, Limitations, and Future Directions

The small sample size was a limitation. Although a power analysis for serial mediation models indicated our sample was sufficient (Schoemann et al., 2017), this model does not account for covariates and some of our effects were smaller than expected, meaning that the analyses were likely underpowered. Another limitation may be the familiarity participants had with the comedic TV shows and movie clips used in the video montage. This may have reduced the effect of witnessing microaggressions against the South Asian characters. The use of MTurk as a means of recruiting participants was also a potential limitation. However, we considered common concerns often seen with crowdsourcing platforms and utilized solutions suggested by Hauser and colleagues (2019) to help mitigate these concerns. For example, to ensure that participants were attentive, the survey was brief in length, contained multiple attention checks at both time points for the survey, and included open ended questions to assess whether participants were fluent English speakers. Furthermore, participants who completed the survey in less than half of the average time, who missed more than half the attention checks, or had substantial missing or problematic data were not included. Settings within both Qualtrics and MTurk were utilized to restrict the geographic location of participants to the U.S., as well as to prevent multiple submissions and indexing. Finally, we also utilized multivariate outlier detection to remove additional problematic cases. Despite these efforts, it remains possible that some individuals may not have fully participated as intended (e.g., finding a quiet place, following all of the steps or diaphragmatic breathing, or fully watching the video montage).

Despite the limitations, this study has significant strengths. First, this study considered the types of racially charged encounters individuals of South Asian descent may regularly experience. The study is innovative in terms of assessing everyday microaggressions compared to overt experiences of discrimination. Despite growing research, little is known about South Asians and this study helps to fill that gap. Furthermore, an individual's identity and self-esteem can be shaped by the media they consume (McCullough et al., 2021). Thus, utilizing clips from popular media to investigate the impact of previous discriminatory experiences on rejection sensitivity and physiological and psychological reaction was a strength. Another innovation was assessing participant's heart rate online via smartwatches both prior to and after viewing the video.

Future research could replicate the findings of this study in person rather than online and may consider creating original video clips or using non-comedic clips. For example, original media content depicting various microaggressions could be created using artificial intelligence to allow for manipulation of scenarios (microaggressive vs. not) across different ethnic and racial groups (Haut et al., 2021). Based on the heterogeneity of the South Asian population, future research may also consider investigating whether there are any differences among different South Asian cultural groups.

Implications

Findings could influence practices within educational institutions where one may not only experience microaggression directed at themselves but may also experience vicarious discrimination when viewing fellow peers of similar ethnicities experiencing discrimination . Repeated exposure to discrimination can lead to heightened rejection sensitivity which makes it likely that the person sees potential rejection even in ambiguous situations (Mendoza-Denton et al., 2002). Thus, it may be helpful to implement practices that provide individuals with the appropriate stress coping strategies to adequately assess and respond to discriminatory experiences while ensuring that they don't become hypervigilant to rejection. Other coping strategies may involve engagement mechanisms, such as social support, problem solving, expression of emotion, which is showcased to mediate the link between microaggressions and mental health (Ogumyemi et al., 2020).

Implementing practices tailored towards raising cultural sensitivity among postsecondary institutions is also critically important. Our results have shown that perceived past discrimination can lead to heightened rejection sensitivity which in turn primes individuals to view microaggressions and sustain emotional and physiological changes. Given the increasing diversity among the student body and that intolerance can lead to a hostile campus where POC are associated with negative stereotypes, it is important that all faculty, students, and staff work towards facilitating a positive campus environment (Ogunyemi et al., 2020). This may include an environment which includes higher

campus diversity and cultural competency to prevent themes such as classroom bias (Ogunyemi et al., 2020). This can be achieved by implementing multicultural training to educate members on how to identify and respond to racial microaggressions on campus along with conducting cultural sensitivity workshops during student orientation (Houshmand et al., 2014). Provided that individual factors, such as rejection sensitivity, are observed to influence an individual's response to a racially ambiguous situation, it may be beneficial to implement educational workshops related to the concept of rejection sensitivity and discuss how it may influence emotional and cognitive responses (Clark et al., 1999).

Conclusion

Overall, the present study contributes to the literature regarding experiences with microaggressions by highlighting the potential impact of perceived racial discrimination and microaggressions on the emotional and physiological well-being of South Asian American postsecondary students. Our findings showcase that individuals who perceive greater past discrimination are more likely to develop heightened rejection sensitivity, which in turn primes them to identify racial microaggressions in their environment—including vicariously through the media they consume—which we believe relates to increased heart rate, heightened negative affect, and decreased positive affect.

The fact that these findings were observed in response to relatively mild microaggressions depicted in popular media suggests that the cumulative impact of these experiences in real life interactions may be even more detrimental. Given that microaggressions are commonplace in educational settings, media representation, and workplaces, these findings have crucial implications for mental health interventions, institutional policies, and media representation.

Future research should include longitudinal studies that can explore the long-term consequences of chronic exposure to microaggressions. It should also include a larger sample size and investigate cultural differences among other ethnic groups, ideally considering how witnessing microaggressions directed at someone from your culture compares to witnessing microaggressions directed at someone from another ethnic group. Additionally, curating original videos potentially through the use of AI demonstrating microaggressions of varying distress levels rather than those with a comedic undertone may be beneficial.

References

Armstead, C. A., Lawler, K. A., Gorden, G., Cross, J., & Gibbons, J. (1989). Relationship of racial stressors to blood pressure responses and anger expression in Black college students. *Health Psychology, 8*(5), 541–556. https://doi.org/10.1037/0278-6133.8.5.541

Avram, R., Tison, G. H., Aschbacher, K., Kuhar, P., Vittinghoff, E., Butzner, M., Runge, R., Wu, N., Pletcher, M. J., Marcus, G. M., & Olgin, J.. (2019). Real world heart rate norms in the health eHeart study. *npj Digital Medicine, 2*(58). https://doi.org/10.1038/s41746-019-0134-9

Bakhtiari, F., Benner, A. D., & Plunkett, S. W. (2018). Life quality of university students from immigrant families in the United States. *Family and Consumer Sciences Research Journal*, *46*(4), 331–346. https://doi.org/10.1111/fcsr.12260

Budiman, A., & Ruiz, N. (2021, April 9). *Asian Americans are the fastest-growing racial or ethnic group in the U.S.* Pew Research Center. https://www.pewresearch.org/short-reads/2021/04/09/asian-americans-are-the-fastest-growing-racial-or-ethnic-group-in-the-u-s/

Chan, W., & Mendoza-Denton, R. (2008). Status-based rejection sensitivity among Asian Americans: Implications for psychological distress. *Journal of Personality*, *76*(5), 1317–1346. https://doi.org/10.1111/j.1467-6494.2008.00522.x

Clark, R., Anderson, N. B., Clark, V.R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805–816. https://doi.org/10.1037/0003-066X.54.10.805

Dooley, E. E., Golaszewski, N. M., & Bartholomew, J. B. (2017). Estimating accuracy at exercise intensities: A comparative study of self-monitoring heart rate and physicalactivity wearable devices. *JMIR mHealth and uHealth*, *5*(3), 34. https://doi.org/10.2196/mhealth.7043

Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, *70*(6), 1327–1343. https://doi.org/10.1037/0022-3514.70.6.1327

ElTohamy, A., Hyun, S., Rastogi, R., Finneas Wong, G. T., Kim, G. S., Chae, D. H., Hahm, H., & Liu, C. H. (2024). Effect of vicarious discrimination on race-based stress symptoms among Asian American young adults during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy, 16*(2), 217–224. https://doi.org/10.1037/tra0001480

Farber, R., Wedell, E., Herchenroeder, L., Dickter, C. L., Pearson, M. R., Bravo, A. (2021). Microaggressions and psychological health among college students: A moderated mediation model of rumination and social structure beliefs. *Journal of Racial and Ethnic Health Disparities, 8,* 245–255. https://doi.org/10.1007/s40615-020-00778-8

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). The Guilford Press.

Hauser, D., Paolacci, G., & Chandler, J. (2019). Common concerns with MTurk as a participant pool: Evidence and solutions. In F. R. Kardes, P. M. Herr, & N. Schwarz (Eds.), *Handbook of research methods in consumer psychology* (pp. 319–337). Routledge/Taylor & Francis Group. https://doi.org/10.4324/9781351137713-17

Haut, K., Wohn, C., Antony, V., Goldfarb, A., Welsh, M., Sumanthiran, D., Jang, J., Ali, R., Hoque, E. (2021). Could you become more credible by being White? Assessing impact of race on credibility with deepfakes. https://doi.org/10.48550/arXiv.2102.08054

Henson, J. M., Derlega, V. J., Pearson, M. R., Ferrer, R., & Holmes, K. (2013). African American student's responses to racial discrimination: How race-based rejection sensitivity and social constraints are related to psychological reactions. *Journal of Social and Clinical Psychology, 32*(5), 504–529. https://doi.org/10.1521/jscp.2013.32.5.504

Hoggard, L. S., Hill, L. K., Gray, D. L., & Sellers, R. M. (2015). Capturing the cardiac effects of racial discrimination: Do the effects "keep going"? *International Journal of Psychophysiology*, *97*(2), 163–170. https://doi.org/10.1016/j.ijpsycho.2015.04.015

Houshmand, S., Spanierman, L. B., & Tafarodi, R. W. (2014). Excluded and avoided: Racialmicroaggressions targeting Asian international students in Canada. Cultural Diversity & *Ethnic Minority Psychology, 20*(3), 377–388. https://doi.org/10.1037/a0035404

Hwang, W., & Goto, S. (2009). The impact of perceived racial discrimination on the mental health of Asian American and Latino college students. *Asian American Journal of Psychology*, *S*(1), 15–28. https://doi.org/10.1037/1948-1985.S.1.15

Kaduvettoor-Davidson, A., & Inman, A. G. (2013). South Asian Americans: Perceived discrimination, stress, and well-being. *Asian American Journal of Psychology*, *4*(3), 155–165. https://doi.org/10.1037/a0030634

Keels, M., Durkee, M., & Hope, E. (2017). The psychological and academic costs of school based racial and ethnic microaggressions. *American Educational Research Journal*, *54*(6), 1316–1344. https://doi.org/10.3102/0002831217722120

Kershaw, K. N., Lewis, T. T., Roux, A. V. D., Jenny, N. S., Liu, K., Penedo, R. J., & Carnethon, M. R. (2016). Self-reported experiences of discrimination and inflammation among men and women: The multi-ethnic study of atherosclerosis. *Health Psychology*, *35*(4), 343–350. https://doi.org/10.1037/hea0000331

Kramer, E. M. (Ed.). (2003). *The emerging monoculture: Assimilation and the "model minority."* Praeger.

Lui, P. P. (2020). Racial microaggression, overt discrimination, and distress: (In)direct associations with psychological adjustment. *The Counseling Psychologist, 48*(4), 551–582. https://doi.org/10.1177/0011000020901714

Lui, P. P., & Quezada, L. (2019). Associations between microaggression and adjustment outcomes: A meta-analytic and narrative review. *Psychological Bulletin*, *145*(1), 45–78. https://doi.org/10.1037/bul0000172

Mastro, D. E., Behm-Morawitz, E., Kopacz, M. A. (2008). Exposure to television portrayals of Latinos: The implications of aversive racism and social identity theory. *Human Communication Research, 34*(1), 1–27. https://doi.org/10.1111/j.1468-2958.2007.00311.x

McCullough, K. M., Wong, Y. J., & Deng, K. (2021). Exploring the connections betweenwatching Asian American YouTubers, racial identity, and self-esteem. *Asian AmericanJournal of Psychology*, *12*(1), 41–51. https://doi.org/10.1037/aap0000218

Mellin, E. A. (2008). Rejection sensitivity and college student depression: Findings andimplications for counseling. *Journal of College Counseling*, *11*(1), 32–41.https://doi.org/10.1002/j.2161-1882.2008.tb00022.x

Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: Implications for African American students› college experience. *Journal of Personality and Social Psychology*, *83*(4), 896–918. https://doi.org/10.1037/0022-3514.83.4.896

National Academy of Medicine. (2017). *Perspectives on health equity and social determinants of health.* The National Academies Press. https://doi.org/10.17226/27117

Ogunyemi, D., Clare, C., Astudillo, Y. M., Marseille, M., Manu, E., & Kim, S. (2020). Microaggressions in the learning environment: A systematic review. *Journal of Diversity in Higher Education*, *13*(2), 97–119. https://doi.org/10.1037/dhe0000107

Ozier, E. M., Taylor, V. J., & Murphy, M. C. (2019). The cognitive effects of experiencing and observing subtle racial discrimination. *Journal of Social Issues, 75*(4), 1087–1115. https://doi.org/10.1111/josi.12349

Poolokasingham, G., Spanierman, L. B., Kleiman, S., & Houshmand, S. (2014). "Fresh off the boat?" Racial microaggressions that target South Asian Canadian students. *Journal of Diversity in Higher Education*, *7*(3), 194–210. https://doi.org/10.1037/a0037285

Roberts, L. B., Maduro, R. S., Derlega, V. J., Peterkin, A. L., Hacker, D. S., & Ellis, K. T. (2017). Race-based rejection sensitivity and racial identity predict African American students' reactions to the fatal shooting of other African Americans: Personal threat and identification with shooting victims as mediators. Journal of Loss & *Trauma, 22*(6), 472–486. https://doi.org/10.1080/15325024.2017.1328242

Robinson-Perez, A., Marzell, M., & Han, W. (2020). Racial microaggressions and psychological distress among undergraduate college students of color: Implications for social work practice. *Clinical Social Work Journal, 48*(2), 343–350. https://doi.org/10.1007/s10615-019-00711-5

Ruiz, N. G., Im, C., Tian, Z. (2023, November 30). *Discrimination experiences shape most Asian Americans' lives*. Pew Research Center. https://www.pewresearch.org/?p=109265

Russell, M. E. B., Hoffman, B., Stromber, S., & Carlson, C. R. (2014). Use of controlled diaphragmatic breathing for the management of motion sickness in a virtual realityenvironment. *Applied Psychophysiology and Biofeedback*, *39*(3–4), 269–277. https://doi.org/10.1007/s10484-014-9265-6

Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science, 8*(4), 379–386. https://doi.org/10.1177/1948550617715068

Sharma, N., Shaligram, D., & Yoon, G. H. (2020). Engaging South Asian youth and families: A clinical review. *International Journal of Social Psychiatry*, *66*(6), 584–592. https://doi.org/10.1177/0020764020922881

South Asian Americans Leading Together (SAALT). (2019). *Demographic snapshot of South Asians in the United States*. https://saalt.org/wp-content/uploads/2019/04/SAALT-Demographic-Snapshot-2019.pdf

Solórzano, D., Ceja, M., & Yosso, T. (2000). Critical race theory, racial microaggressions, and campus racial climate: The experiences of African American college students. *Journal of Negro Education*, *69*(1/2), 60–73. https://www.jstor.org/stable/2696265

Stein, G. L., Castro-Schilo, L., Cavanaugh, A. M., Mejia, Y., Christophe, N. K., & Robins, R. (2019). When discrimination hurts: The longitudinal impact of increases in peer discrimination on anxiety and depressive symptoms in Mexican-origin youth. *Journal of Youth and Adolescence*, *48*(5), 864–875. https://doi.org/10.1007/s10964-019-01012-3

Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist*, *62*(4), 271–286. https://doi.org/10.1037/0003-066X.62.4.271

Sue, D. W. (2010). *Microaggressions in everyday life: Race, gender, and sexual orientation*. John Wiley & Sons, Inc.

Tao, X., & Fisher, C. (2022). Exposure to social media racial discrimination and mental health among adolescents of color. *Journal of Youth and Adolescence, 51*(1), 30–44. https://doi.org/10.1007/s10964-021-01514-z

The United States Department of Justice. (2024). Hate Crime Statistics, 2023: Victims. https://www.justice.gov/crs/news/2023-hate-crime-statistics

Tineo, P., Lowe, S. R., Reyes-Portillo, J. A., & Fuentes, M. A. (2021). Impact of perceived discrimination on depression and anxiety among Muslim college students: The role of acculturative stress, religious support, and Muslim identity. *American Journal of Orthopsychiatry*, *91*(4), 454–463. https://doi.org/10.1037/ort0000545

Torres-Harding, S., Torres, L., & Yeo, E. (2020). Depression and perceived stress as mediators between racial microaggressions and somatic symptoms in college students of color. *American Journal of Orthopsychiatry*, *90*(1), 125–135. https://doi.org/10.1037/ort0000408

Valkenburg, P. M., Peter, J., & Walther, J. B. (2016). Media effects: Theory and research. *Annual Review of Psychology, 67*(1), 315–338. https://doi.org/10.1146/annurev-psych-122414-033608

Verdugo, J. L., Kong, Z., Liyanage, D. S., Keum, B. T., Moody, M. D., Oh, H. Y. (2024). Associations between vicarious discrimination and mental health among young adult college students: Findings from the 2020–2021 Healthy Minds Study. *Journal of Affective Disorders, 361*, 760–767. https://doi.org/10.1016/j.jad.2024.06.082

Washington, G., Mance, G., Aryal, S., Ngueajio, M., Salaam, C., & Alim, C. (2021). ABL-MICRO: Opportunities for affective AI built using a multimodal microaggression dataset. *AffCon@AAAI, 2897*. https://ceur-ws.org/Vol-2897/AffconAAAI-21_paper3.pdf

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070. https://doi.org/10.1037/0022-3514.54.6.1063

Williams, Yu, Y., Jackson, J. S., & Anderson, N.B. (1997). Racial differences in physical and mental Health: Socioeconomic status, stress, and discrimination. *Journal of Health Psychology*, *2,* 335–351. https://doi.org/10.1177/135910539700200305

Wong-Padoongpatt, G., Zane, N., Okazaki, S., & Saw, A. (2020). Individual variations in stress response to racial microaggressions among Asian Americans. *Asian American Journal of Psychology*, *11*(3), 126–137. https://doi.org/10.1037/aap00001

Yi, J., La, R., Lee, B. A., & Saw, A. (2023). Internalization of the model minority myth and sociodemographic factors shaping Asians/Asian Americans' experiences of discrimination during COVID-19. *American Journal of Community Psychology, 71*(1–2), 123–135. https://doi.org/10.1002/ajcp.12635

Author Note

Megha Datta https://orcid.org/0000-0002-1087-9253

Zeena Whayeb https://orcid.org/0009-0008-5800-8845

Data collection were sponsored by the UM-Dearborn Experience+ Office. Portions of these findings were presented as a poster at the 2023 American Psychological Association Convention, Washington, DC, United States. We have no conflicts of interest to disclose.

Correspondence concerning this article should be addressed to Megha Datta. Email: meghad@umich.edu

APPENDIX

Instructions for Diaphragmatic Breathing

Participants were provided with the following instructions to partake in diaphragmatic breathing for one minute to obtain a baseline heartrate. The instructions were obtained from a study conducted by Russell and colleagues (2014) pertaining to diaphragmatic breathing:

1. Please find a comfortable position with your head centered and supported. Relax your shoulders and sit with your knees and feet apart.
2. Close your eyes, smooth your forehead, and relax your mouth to ensure you are not clenching your jaw.
3. Place your right hand on top of your stomach, right below the ribcage. Release air from your body by exhaling in a complete and relaxed manner without controlling or forcing air from your body.
4. When you are ready, take your next breath. Ensure your stomach is gently rising as you inhale, you may feel it pushing against your hand. Count to three while you breath in.
5. Release your muscles and let your stomach fall as you exhale. Count to three as you release your breath in a relaxed manner.

Repeat the cycle for one minute and record the baseline heart as displayed on your Apple Watch or Fitbit.

Publish Your Research in *Psi Chi Journal*

Undergraduate, graduate, and faculty submissions are welcome year round. Only one author (either first author or coauthor) is required to be a Psi Chi member. All submissions are free. Reasons to submit include

- a unique, doctoral-level, peer-review process
- indexing in PsycInfo, EBSCO, Web of Science's Emerging Sources Citation Index, and Crossref databases
- free access of all articles at psichi.org
- our efficient online submissions portal

View Submission Guidelines and submit your research at *https://www.psichi.org/?page=JN_Submissions*

Become a Journal Reviewer

Doctoral-level faculty in psychology and related fields who are passionate about educating others on conducting and reporting quality empirical research are invited become reviewers for *Psi Chi Journal*. Our editorial team is uniquely dedicated to mentorship and promoting professional development of our authors—Please join us!

To become a reviewer, visit *https://www.psichi.org/page/JN_BecomeAReviewer*

Resources for Student Research

Looking for solid examples of student manuscripts and educational editorials about conducting psychological research? Download as many free articles to share in your classrooms as you would like.

Search past issues, or articles by subject area or author at *https://www.psichi.org/journal_past*

Learn About Psi Chi

Psi Chi is the International Honor Society in Psychology. Membership is primarily open to undergraduates, graduate students, transfer students, full-time and part-time faculty members, and alumni.

See membership benefits and a link to apply at *https://www.psichi.org/page/member_benefits*

Register an account:
https://pcj.msubmit.net/cgi-bin/main.plex

PSI CHI