

Status-Based Rejection Sensitivity Among Asian Americans: Implications for Psychological Distress

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ABSTRACT We examined whether anxious expectations of discrimination among Asian Americans can help explain this group's elevated levels of internalizing symptomatology, such as lower self-esteem (Twenge & Crocker, 2002) and higher depressive symptoms (Okazaki, 1997, 2002) relative to European Americans. Study 1 reports on the development and validation of a scale measuring status-based rejection sensitivity among Asian Americans (RS-A). In Study 2, scores on the RS-A were related to spontaneous discrimination attributions specifically in situations where discrimination is both applicable and possible for Asian Americans. Study 3 revealed that shame mediated the relationship between RS-A and internalizing symptomatology. Implications for well-being and intergroup interactions are discussed.

A growing body of research documents that Asian Americans may be at heightened risk for anxiety, depression, and low self-esteem (Okazaki, 1997, 2002; Twenge & Crocker, 2002). Such internalizing symptomatology (Nadeem & Graham, 2005) can be differentiated from externalizing symptomatology, which includes aggression and

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delinquency (Wright, Zakriski, & Drinkwater, 1999). For example, Asian American college students report higher levels of intrapersonal socioemotional maladjustment than European American college students (Abe & Zane, 1990), and Asian American college students have significantly higher levels of depression and social anxiety than do European American college students, even when controlling for generational status and differing response styles (Okazaki, 1997, 2000). In addition, a meta-analysis of 712 American studies comparing levels of self-esteem among American ethnic groups found that, overall, Asian Americans have lower levels of self-esteem than Latino American or African American ethnic groups (Twenge & Crocker, 2002).

Although lower self-esteem among individuals of Asian descent compared to other groups are sometimes interpreted as reflecting cultural differences in the subjective value of high self-esteem rather than psychological distress (e.g., Heine & Lehman, 1999), converging evidence indicates that this cultural explanation may not necessarily generalize to Asian Americans. The covariation of anxiety, depression, and self-esteem among Asian Americans suggests genuine psychological distress in this group. Asian Americans uniquely experience elevated depression compared to both Asians living in Asia (Chang, 2002) and European Americans (Abe & Zane 1990; Okazaki, 1997), controlling for acculturation. In turn, European Americans and Asians in Asia do not differ on depressive symptomatology (Zhang & Norvilitis, 2002). Furthermore, Asian Americans emphasize the importance of self-esteem as much as European Americans (Heine, Lehman, Markus, & Kitayama, 1999), and the positive relationship between self-esteem and subjective well-being is as robust among Asian Americans as it is among European Americans (Benet-Martinez & Karakitapoglu-Aygun, 2003). Together, these findings suggest that there is something unique about the Asian American experience that contributes to internalizing symptomatology.

In this article, we propose that one of the experiences that distinguishes Asian Americans from Asians living in Asia and European Americans—and which might help account for differences in psychological distress—is that of having to contend with discrimination. Despite their reputation as a model minority (Lee, 1994), various studies confirm that Asian Americans expect and experience at least as much discrimination as other minorities in the United States. (e.g.,

Crocker & Lawrence, 1999; Oyserman & Sakamoto, 1997; Sue, Bucceri, Lin, Nadal, & Torino, 2007), albeit of a more interpersonal (e.g., being made fun of by peers) and less institutional (e.g., being profiled by police) variety (Greene, Way, & Pahl, 2006). Based on prior research on individual differences in reactions to stigma among African Americans (Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002), we propose that *status-based rejection sensitivity* (hereafter, status-based RS)—the tendency to anxiously expect, readily perceive, and intensely react to discrimination and prejudice based on membership in a stigmatized social category or status group—can help explain some of the variance in Asian American psychological distress.

The notion that discrimination-related experiences can help account for variance in internalizing symptomatology stands in contrast to a wealth of theory and research on the conceptualization of stigma as a buffer to self-esteem (Crocker & Major, 1989), which proposes that attributions of discrimination can be protective of the self. Specifically, in the face of negative outcomes, blaming negative outcomes on discrimination rather than one's own abilities or effort can be protective against negative self-views (Major et al., 2002). This account has been influential in the literature on stigma from the target's perspective in part because it helps explain the well-replicated finding that African Americans, who have arguably suffered some of the most blatant and severe injustices based on their status group membership in the United States, tend to show significantly higher levels of self-esteem relative to European Americans (Twenge & Crocker, 2002). Given the prototypicality of African Americans as the targets of stigma (Espiritu, 1997), the zeitgeist may have shifted away from efforts to link discrimination to self-esteem and other internalizing symptoms (though see Schmitt & Branscombe 2002; Major, Kaiser, & McCoy, 2003).

Linking Status-Based RS to Asian American Psychological Distress

In contrast to African Americans, there are several theoretical reasons why the self-protective effects of stigma may not apply as readily to Asian Americans. First, the sociopolitical histories of African and Asian Americans have differed importantly (Ogbu & Simons, 1998). The civil rights movement of the 1960s may have served to make the

possibility of discounting discriminatory feedback more chronically accessible to African Americans. In support of this idea, data from Twenge and Crocker (2002) show that following the civil rights movement, self-esteem among African Americans has increased linearly. A consciousness-raising movement of such magnitude has not yet occurred among Asian Americans in the United States. Second, the situations where discrimination may occur for Asian Americans differ from those for African Americans. In particular, Asian Americans report being discriminated against in interpersonal situations (Greene et al., 2006) where the typical reaction to status-based rejection has been shown to be self-directed and negative in nature (Dickerson, Gruenewald, & Kemeny, 2004). This may further limit discounting of discriminatory feedback among Asian Americans, leading to negative outcomes in self-esteem. In support of this hypothesis, there is a robust relationship between past experiences of discrimination and lowered self-esteem (Greene et al., 2006) and elevated depressive symptomatology (Liang, Li, & Kim, 2004) among Asian Americans.

Rather than focusing on past experiences of discrimination *per se* in this research, we examine the psychological legacy of discrimination for Asian Americans by focusing on people's anticipatory threat to such discrimination. We do so because measuring past experiences precludes the possibility that vicarious experiences (e.g., through peer observation, media exposure, or parental communication) may themselves play a role in creating anxiety and threat about stereotyping and prejudice (Mendoza-Denton et al., 2002; Ward, Hansbrough, & Walker, 2005). Further, research has shown that anticipatory threat surrounding discrimination, independent of the materialization of such discrimination, can be a powerful determinant of subsequent behavior and outcomes (Allison, 1998; Blascovich, Spencer, Quinn, & Steele, 2001; Frable, 1993; Lang, 1995; Steele, 1997; Terrell & Terrell, 1981). Together, the above literature suggests that focusing only on past experiences may lead to an underestimation of the effects of discrimination on subsequent outcomes. As such, following prior research on rejection sensitivity (Downey & Feldman, 1996; Mendoza-Denton, Page-Gould, & Pietrzak, 2006), we examine the relationship between discrimination and elevated internalizing symptomatology among Asian Americans by assessing individual differences in anxious expectations of status-based rejection.

The Present Research

In this article, we report three studies that tested the general hypothesis that status-based RS is related to internalizing symptoms among Asian Americans. In Study 1, we report on the development of a measure of anxious expectations of status-based rejection specifically constructed for Asian Americans. In Study 2, we test the predictive utility of the measure by asking whether individual differences in anxious expectations of status-based rejection among Asian Americans predict attributions to racism in negative encounters in a variety of domains. Finally, in Study 3, we test whether individual differences in such anxious expectations help explain differential expressions of internalizing symptomatology following discrimination, and also the emotions that mediate the relationship between anxious expectations and internalizing symptomatology. Together, the studies suggest that individual differences in status-based RS may be related to affective reactions to discrimination and therefore play an important role in helping explain the negative mental health outcomes among Asian Americans.

STUDY 1

Study 1 describes the development of the status-based RS questionnaire for Asian Americans (RS-A). The measure assesses individual differences in anxious expectations of being discriminated, devalued, or stigmatized on the basis of one's group membership, which we view as being at the core of status-based RS (Mendoza-Denton, in press). In line with our view of anxious expectations as *hot cognitions* in which affect amplifies the impact of a given cognition (Metcalfe & Mischel, 1999; Mischel, Ayduk, & Mendoza-Denton, 2003), people are considered to be high on status-based RS when they both expect rejection based on status and feel anxious or concerned at the possibility of this outcome.

Prior work with African Americans using an individual differences measure of status-based RS specifically designed for this group (*RS-race*; Mendoza-Denton et al., 2002) showed that (a) self-esteem was unrelated to RS-race among African Americans and (b) Asian Americans reported lower levels of RS-race than African Americans on this particular measure. At first glance, these data may argue against the logic of using this construct to explain variability in

internalizing symptoms among Asian Americans. However, the measure developed by Mendoza-Denton et al. (2002) specifically targeted African Americans and, as such, does not adequately capture Asian Americans' discrimination concerns (Mendoza-Denton & Mischel, 2007). For example, whereas African Americans may experience anticipatory threat in situations where they may face discrimination from authorities (e.g., when being harassed by security guards, or during a job interview), situations pertinent to athletic inability or language fluency may more readily activate stigma-related threat among Asian Americans (see Cheryan & Monin, 2005; Sue et al., 2007). Thus, situations that are viewed as benign by the one group may pose considerable threat to another, and vice versa (Mendoza-Denton et al., 2002).

Because the antecedents and trigger features that activate anxious expectations of status-based rejection among African Americans and Asian Americans may differ considerably, we developed and validated the RS-A specifically for Asian American populations. The questionnaire is modeled after Mendoza-Denton et al.'s (2002) RS-race questionnaire for African Americans, albeit containing different situational triggers culled from focus group and open-ended interviews. Based on our conceptualization of the dynamics of status-based RS among Asian Americans, we predicted that RS-A scores would be positively related to depression and social anxiety, and negatively related to self-esteem. This prediction differs from one previously made for African Americans (Mendoza-Denton et al., 2002), for whom RS-race has been found to be unrelated to self-esteem.

Importantly, we sought to show that the relationship between RS-A and these outcome variables holds over and above the effect of sensitivity to rejection for personal reasons (RS-personal; Downey & Feldman, 1996), a construct that has also been found to be related to depression and self-esteem (Downey & Feldman, 1996; Ayduk et al., 2000). Partialing out the effects of RS-personal allows us to be more confident that relationships found between RS-A and outcome variables of interest are not resultant from generalized rejection concerns (see Major & O'Brien, 2005). In addition, we included the RS-race questionnaire designed for African Americans to test our key prediction that internalizing symptomatology would be predicted by anxious expectations of discrimination specifically in situations relevant to Asian American discrimination rather than African American discrimination. To the degree that generational status

may explain some of the variance in self-esteem among Asian Americans (Heine et al., 1999), we also control for generational status. Finally, because RS-race among African Americans has been shown to be negatively related to academic performance and positively related to ethnic identity (Mendoza-Denton et al., 2002), we measured these two concepts here as well. Although we did not have a straightforward prediction for the relationship between RS-A and ethnic identity, we expected no relationship between RS-A and academic performance, given that low academic competence is not part of the Asian American stereotype (Oyserman & Sakamoto, 1997).

Measure Development and Validation

Participants and Procedure

This study was conducted at the University of California, Berkeley, a large public research university in the United States. Over the course of data collection, the ethnic distribution of the undergraduate population was as follows: 46.8% Asian, 4.3% Black, 12.0% Latino/a, 34.4% White, and 2.5% other.

Study participants were 144 (65% female) self-identified Asian Americans ($M_{age} = 20.41$ years, $SD = 1.69$). Among these, 57 were foreign born and had been in the United States for an average of 10.39 years ($SD = 6.37$), 72 were U.S. born with both parents being foreign-born, 6 were U.S. born with one parent being U.S. born, and 6 were U.S. born with both parents being U.S. born. Three participants did not report birthplace information. The pattern of results did not differ when excluding foreign-born individuals, so the final sample retained all participants. Participants completed the study for partial course credit. Participants arrived in the laboratory in groups between 1 and 12 persons in size. They were seated in a large room by an experimenter, who informed the participants that the study was a survey battery that assesses the thoughts and feelings that college students may have in everyday situations. Participants then received the survey packet, completed it, and handed the completed packet in to the experimenter.

Survey Battery—Covariates

RS-personal. The RS-personal (Downey & Feldman, 1996) scale assesses anxious expectations of rejection by significant others due to

one's personal, unique characteristics. The questionnaire consists of 18 hypothetical situations in which rejection by a significant other is possible. For each situation, people first indicate their concern or anxiety about the outcome on a 6-point scale ranging from *very unconcerned* (1) to *very concerned* (6). They then indicate the likelihood that the other person would respond in an accepting manner on a 6-point scale ranging from *very unlikely* (1) to *very likely* (6). The score for acceptance expectancy is reversed to index rejection expectancy. The anxiety score is multiplied by the expectation score to generate an anxious expectation score for each situation, and scores for all situations are averaged to compute the total RS-personal score. In this study, we use the RS-personal as a measure of prejudice-irrelevant apprehension in interpersonal interactions (sample $\alpha = .81$, $M = 9.57$, $SD = 2.75$).

Status-based RS for Asian Americans (RS-A). The questionnaire, modeled after the RS-race measure for African Americans (Mendoza-Denton et al., 2002), assesses participants' anxious expectations of status-based rejection in each situation. The initial step in developing this questionnaire involved conducting focus groups designed to encourage discussion about perceived prejudice. Two 6-person focus groups of Asian American undergraduates were convened in a classroom on campus to generate representative situations in which discrimination could occur. Participants were recruited by announcement in undergraduate classes and by word of mouth; they received free dinner as compensation. All participants in the two focus groups self-identified as being Asian American, with equal distribution of males and females, but participants' specific ethnic identification, age, and socioeconomic status were not collected. An Asian American researcher facilitated each focus group to minimize reluctance to discuss potentially controversial subject matter (cf. Sue et al., 2007). Group participants were prompted to think of situations in which they would anticipate discrimination. Each generated situation was then discussed in the full group, and situations deemed relevant by a majority of group participants were retained. We did not attempt to generate an exhaustive list of status-based rejection situations. Instead, our goal was to collect some representative rejection situations for this group. These focus groups yielded 11 face-valid, nonoverlapping situations in which Asian American students might experience apprehension about being discriminated

against on the basis of their being Asian American. Consistent with Greene et al.'s (2006) analysis of discrimination directed at Asian Americans, the situations involve peer interaction with familiar figures (e.g., classmates, possible romantic partners) as well as unfamiliar figures of both the high-investment (e.g., professors) and low-investment (e.g., passers-by) varieties. The situations are also consistent with some of the themes highlighted in Sue et al.'s (2007) qualitative analysis of racial microaggressions against Asian Americans, more specifically, the "Alien in Own Land" theme and the "Ascription of Intelligence" theme. These situations are listed in Table 1 and comprise the RS-A scale.

For each of the 11 situations, people first indicate their concern or anxiety about possible rejection on a 6-point scale ranging from *very unconcerned* (1) to *very concerned* (6). They then indicate the likelihood that the other person would respond in a rejecting manner on a 6-point scale ranging from *very unlikely* (1) to *very likely* (6). The anxiety score is multiplied by the expectation score to generate an anxious expectation score for each situation; scores for all situations are averaged to compute the total RS-A score. In 8 of the 11 generated situations, focus group participants indicated that rejection in those situations would be most likely attributed to discrimination, whereas for the other three situations (Items 7, 10, and 11 in Table 1) there might be multiple bases for rejection concerns (e.g., personal as well as status-based). Therefore, for these three situations we explicitly asked survey participants to indicate how much they expected and were anxious about rejection on the basis of their race or ethnicity.¹ For the other eight situations we asked survey participants to report on their rejection expectations and concerns, without explicitly specifying race or ethnicity. As reported in more detail below, these situations all load onto a single factor, regardless of the exact wording of the prompt, suggesting that they form part of a unitary construct.

1. We use the term "race or ethnicity" throughout our survey materials to operationalize the group status of Asian Americans and European Americans for our participants, recognizing nevertheless that differences between these groups may be characterized as ethnic, panethnic, racial, cultural, or a mixture of these (Betancourt & López, 1993; Lien, Conway, & Wong, 2004; Phinney, 1996).

Table 1
Factor Loadings for RS-A Questionnaire Items and Psychometric Properties of RS-A Questionnaire for Asian Americans

#	Item	Factor Loading
1	You are working on a group lab project with several other people from your class. While working, several people mentioned a movie they would like to see afterwards. Someone offers to call people later to organize it.	0.59
2	Your mother is visiting you this weekend, and she made your favorite home-cooked dish for you to take to school on Monday.	0.53
3	Imagine that you are in lecture, and the professor poses a difficult question for the class. You happen to know the answer and would like to raise your hand.	0.56
4	You ask a salesperson at a store about a product, and she mumbles a response that you don't catch. As you ask her to repeat what she just said . . .	0.62
5	You are in a shopping mall. Right in front of you is a large group of people your age who are the same ethnicity as you, talking loudly in a foreign language. There are several other shoppers around you.	0.59
6	You have a big science exam coming up, and some of the students would like to organize their own study group. You are asked to join the group.	0.62
7	The annual school dance is coming up soon, and there is someone that you know fairly well that you would like to go to the dance with.	0.66
8	On the first day of your engineering class, your professor asked the students to form groups to work on the class project over the course of the semester. Several other students asked you to join their group.	0.70
9	You are at a party, and you are introduced to a friend of a friend, who proceeds to ask you where you're from.	0.62
10	You call an attractive person that you know fairly well, and you leave a message on their answering machine about going to dinner sometime.	0.59
11	One of your classmates who happen to be of the same ethnicity is having difficulty with a class assignment. You offer your help to the person.	0.63

Note: The anxiety and expectation questions for Items 7, 10 and 11 are asked with "because of your race or ethnicity" appended. A formatted copy of the scale can be found online at <http://rascl.berkeley.edu/scales/rs-a.pdf>.

RS-Race for African Americans (RS-Race). The RS-race Questionnaire (Mendoza-Denton et al., 2002) assesses status-based RS among African American in situations where discrimination is possible and applicable to African Americans, although some items may be important to non-European Americans in general. The questionnaire consists of 12 hypothetical situations. For each situation, participants first indicate their concern or anxiety about the outcome on a 6-point scale ranging from *very unconcerned* (1) to *very concerned* (6). They then indicate the likelihood that the other person would respond in a rejecting manner on a 6-point scale ranging from *very unlikely* (1) to *very likely* (6). As with other scales within the rejection sensitivity construct, the anxiety score is multiplied by the expectation score to generate an anxious expectation score for each scenario, and scores for all scenarios are averaged to compute the total RS-race score (sample $\alpha = .88$, $M = 5.35$, $SD = 3.70$).

Survey Battery-Outcome Variables

Self-esteem. The Rosenberg (1979) Self-Esteem Questionnaire is a valid, reliable 10-item Likert scale, in which participants indicate on a 6-point scale how much each statement reflects their self-attitudes (e.g., “I take a positive attitude towards myself”). A high score indicates high self-esteem ($\alpha = .90$, $M = 4.40$, $SD = .87$).

Depression. To assess depression, we used the Beck Depression Inventory (BDI; Beck et al., 1979), a widely used 23-item scale that assesses the degree to which participants have experienced symptoms of depression in the past week on a scale from 0 to 3 for each item. Responses are summed across the 23 items, with higher scores indicating more expression of depressive symptoms ($\alpha = .90$, $M = 10.42$, $SD = 8.85$).

Social anxiety. The Social Avoidance and Distress Scale (SADS; Watson & Friend, 1969) is a 28-item true or false scale that assesses the degree to which participants experienced anxiety in social situations, with a subscale assessing the tendency to avoid stressful situations and a subscale assessing felt anxiety. Participants either endorse (T) or reject (F) each short description of a felt reaction to a social situation. Responses within each subscale are averaged, with

higher scores indicating higher levels of avoidance or anxiety (avoidance $\alpha = .88$, $M = .25$, $SD = .23$; anxiety $\alpha = .83$, $M = .34$, $SD = .27$).

Ethnic identity. The Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992; Roberts et al., 1999) is a 12-item Likert scale measuring the degree to which one is identified with one's own ethnic group, with two factors: the degree to which one is interested to seek out things related to one's own ethnic group (search, $\alpha = .72$, $M = 2.77$, $SD = .61$) and the degree to which one self-identifies with one's own ethnic group (commitment, $\alpha = .89$, $M = 3.11$, $SD = .59$). Sample items include "I have spent time trying to find out more about my own ethnic group, such as history, traditions, and customs" (search subscale) and "I feel a strong attachment towards my ethnic group" (commitment subscale). Participants rate their agreement with each statement on a scale from *strongly disagree* (1) to *strongly agree* (4). Responses are averaged within each subscale, with higher scores indicating higher levels of ethnic identity.

Academic achievement. Participants self-reported their cumulative college grade point average (GPA) on a continuous scale from 0.00 to 4.00, corresponding to the minimum and maximum possible GPA at this institution ($M = 3.23$, $SD = .48$).

Results

Factor Analysis and Psychometric Properties

The RS-A scores for the 11 situations were subjected to a principal component analysis to explore the number of factors that could be extracted from the data. This analysis yielded two factors with eigenvalues greater than 1.00, but only one factor was retained on the basis of the scree test. This factor had an eigenvalue of 4.12 and accounted for 37% of the variance (the next three factors had eigenvalues of 1.34, 0.98, and 0.93, and accounted for 12%, 9%, and 9% of the variance, respectively). The factor loadings of the RS-A are as listed in Table 1. The averaged scores of the 11 scenarios make up the final RS-A score. The resultant measure shows high internal reliability for Asian Americans on the basis of the 11 product scores ($\alpha = .83$). The mean score was 7.20, with a standard deviation of 3.79.

Partial Variables

Unless specifically mentioned, all analyses in this article involving the RS-A scale controlled for RS-personal and RS-race, due to their method and conceptual overlap and to ascertain the unique contributions of RS-A beyond that of the other RS scales. Given consistent gender differences in the incidence of internalizing symptoms (e.g., Hoffmann, Powlishta, & White, 2004), gender was also controlled for in all analyses. Finally, to disentangle the effects of acculturation (Heine et al., 1999) from those of RS-A, generational status was also controlled for. However, consistent with our expectations, generational status was unrelated to RS-A, $F(3, 135) = 1.28, ns$.

Criterion Validity

Table 2 provides both zero-order and partial correlations RS-A had with constructs of interest among Asian Americans. RS-A scores were significantly correlated positively with RS-personal, RS-race, depressive symptoms, SADS-avoidance, and SADS-anxiety, and negatively with self-esteem. As expected, the four internalizing symptomatology measures intercorrelated significantly in our sample of Asian Americans (r range = .27 to .66, all $ps < .001$). Also as expected, the three RS scales intercorrelated significantly due to shared method variance and conceptual overlap (r range = .51 to .61, all $ps < .001$). Nevertheless, positive correlations with depressive symptoms, SADS-avoidance, and SADS-anxiety, and negative correlations with self-esteem remained significant when we partialled out the effects of RS-personal, RS-race, gender, and generational status. This is initial evidence that RS-A uniquely explains internalizing symptomatology among Asian Americans above and beyond RS-personal (which has been shown to be correlated with self-esteem and other internalizing symptomatology among all American ethnic groups, e.g., Downey & Feldman, 1996) and RS-race (which has not).²

2. Supporting the notion that RS-A is less meaningful and does not relate to internalizing symptomatology for European Americans, in a separate sample of European American college students ($n = 225$), RS-A scores were significantly lower ($M = 4.20, SD = 2.69, t = 8.27, p < .0001, d = .91$) and had significantly less variability (folded $F(143,224) = 1.98, p < .0001$) compared to Asian Americans.

Table 2
Zero-Order and Partial Correlations Between RS-A and Outcome Variables Among Asian American Participants in Study 1

Variable	Zero-Order Correlations	Controlling for RS-R, RS-P, Sex, and Generational Status
RS-P	.55***	—
RS-R	.62***	—
Depressive symptoms	.37***	.19*
Self-esteem	-.44***	-.26**
SADS-avoidance	.34***	.26**
SADS-anxiety	.37***	.21*
Ethnic Identity Search	.00	.03
Ethnic Identity Commitment	-.16+	-.08
Grade Point Average	-.01	-.03

+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Equally important, RS-A did not have the same properties as RS-race. Unlike previous research showing that status-based RS was related to grade point average and ethnic identity among African Americans (Mendoza-Denton et al., 2002), RS-A was not correlated with college cumulative grade-point average, ethnic identity search, nor ethnic identity commitment among Asian Americans. Furthermore, in contrast to RS-A, RS-race was not significantly correlated with any of the dependent variables tested above (all $rs < .17$, ns) among Asian Americans. This suggests that RS-race was not a relevant outcome predictor for internalizing symptomatology among Asian Americans.

Replication and Test-Retest Reliability

We were interested in demonstrating the test-retest reliability of the RS-A scale as well as to replicate the relationship between RS-A and internalizing symptomatology in a different cohort of undergradu-

Further, RS-A scores were uncorrelated with self-esteem ($r = -.06$, ns). A test of differences between correlations showed this relationship to be different than that for Asian Americans, $z = 1.88$, $p(\text{one-tailed}) = .03$.

ates. Data collection occurred 2.5 years after the administration of the original battery reported above. We selected this time period because the psychology major at the university is a 2-year program, and, as such, the two samples were unlikely to have overlapping participants. Participants were 241 Asian American undergraduates enrolled in psychology classes ($M_{age} = 19.81$, $SD = 1.47$, 68% female) at UC Berkeley. Participants completed an Internet-based survey battery consisting of the RS-personal ($\alpha = .78$), RS-race ($\alpha = .92$), RS-A ($\alpha = .89$), and the Rosenberg Self-Esteem ($\alpha = .90$) scale at the beginning of the semester for partial course credit. Participants also completed a demographics form containing questions about their race or ethnicity, gender, and generational status. RS-A remained significantly correlated with self-esteem, partial $r = -.19$, $p < .01$ in this sample of Asian American participants. A subset of 63 Asian American participants ($M_{age} = 19.94$, $SD = 1.38$, 62% female) also completed the RS-A scale ($\alpha = .88$) a second time an average of 59.32 days ($SD = 24.54$) after the first administration. In the new sample, the Pearson correlation coefficient for test-retest reliability of RS-A was high over a 2-month period ($r = .58$, $p < .0001$).

Confirmatory Factor Analysis

One concern is the degree to which the one-factor structure derived from the exploratory factor analysis is reliable. To address this question, 463 Asian American undergraduates enrolled in psychology classes 3 years after the conclusion of the first sample ($M_{age} = 20.09$, $SD = 2.85$, 70% female) at the same university as before completed the RS-A measure ($\alpha = .89$). The data were submitted to a confirmatory factor analysis, specifying a one-factor structure, using the CALIS procedure in SAS (Hatcher, 1998). The Lagrange Multiplier test revealed that model fit would be improved by allowing some error terms to correlate (E6 & E8, E7 & E10). This is unsurprising, given the thematic overlap across these pairs of items (see Table 1). A subsequent confirmatory factor analysis, modeling the correlated error between item 6 and item 8, and the correlated error between item 7 and item 10, demonstrated adequate fit for the one-factor solution (RMSEA = .08, GFI = .93, CFI = .95; per Brown, 2006).

Discussion

Our aim in Study 1 was to develop a measure of status-based RS among Asian Americans. Consistent with our predictions, this dynamic seems to have a different “footprint,” or nomological net, among Asian Americans than among other groups. RS-race among African Americans is related to ethnic identity and academic achievement, yet unrelated to self-esteem (Mendoza-Denton et al., 2002). RS-A, by contrast, is unrelated to ethnic identity and academic achievement, but is negatively correlated with self-esteem and positively correlated with depressive symptoms and social anxiety among Asian Americans. These relationships remain robust even after controlling for theoretically related constructs (RS-personal, RS-race, gender, and generational status).

These findings may provide some insight into explaining the elevated levels of depression and social anxiety among Asian Americans above and beyond cultural factors such as exposure to Western culture (e.g., Heine et al., 1999) or norms and traditions about disclosure of psychological distress (e.g., Okazaki & Kallivayalil, 2002). Rather than being a purely cultural phenomenon, there is some evidence that internalizing symptomatology among Asian Americans may be related to discrimination concerns.

Despite being consistent with predictions, in Study 1 we did not directly assess participants' attributions to the scenarios of the RS-A scale. Study 2 seeks to address this shortcoming by asking participants explicitly to attribute a rejecting outcome to a number of factors, with the prediction that RS-A would be positively related to discrimination attributions only in those situations relevant to the Asian American experience of discrimination.

STUDY 2

Study 2 addresses the construct validity of the RS-A scale for Asian Americans, asking whether scores on the RS-A scale are indeed related to spontaneous discrimination attributions specifically in the situations described in this questionnaire. We asked Asian American participants to read descriptions of several situations relevant to college students and imagine actually being rejected in them. We

selected situations representative of the Asian American experience of discrimination, the African American experience of discrimination, and discrimination-irrelevant interpersonal rejection, hereafter referred to as *As-Am*, *Af-Am*, and *Irr* situations. These situations were operationalized using situations derived from the RS-A (Study 1), RS-race (Mendoza-Denton et al., 2002), and RS-personal (Downey & Feldman, 1996) questionnaires, respectively. The cause of the rejection was not specified in any of the situations. Participants were asked to report on their attributions for the rejection. We did not expect that participants would make discrimination attributions in the *Irr* situations. We expected participants to recognize discrimination as a possible reason for being rejected in both the *As-Am* and *Af-Am* situations. Nevertheless, without specific applicability, it is likely that *Af-Am* situations do not trigger chronically anxious expectations of discrimination among Asian Americans, and thus RS-A scores should be positively related to spontaneous attributions to discrimination only in the *As-Am* situations.

Procedure

Study 2 was conducted at the same institution as above. Study participants were 184 Asian American undergraduates enrolled in psychology classes ($M_{age} = 19.99$, $SD = 1.65$). Eighty-three of the 184 Asian Americans were foreign born, having been in the United States on average for over a decade ($M = 10.15$ years, $SD = 5.52$). The sample was 64% female; 2 participants did not indicate their gender. Participants completed the study for partial course credit.

Rejection Attribution Task

Designed to assess spontaneous attributions in *As-Am*, *Af-Am*, and *Irr* situations, the rejection attribution task consisted of the two highest-loading situations selected from each of the rejection sensitivity scales, expanded into half-page vignettes by the addition of a short paragraph describing the rejection following the interaction. Participants were first asked to imagine themselves in that situation and were told at the end of the vignette that they had been rejected. Participants were then asked to identify the degree to which they thought each of eight reasons played a role in the rejection on a scale from 1 (*very little*) to 6 (*very much*). The reasons list included four

facets related to self: my personality, my gender, my attractiveness, and my ethnicity; and four facets related to other: their personality, their gender, their attractiveness, and their ethnicity (see Crocker, Cornwell, & Major, 1993). Below the eight reasons, we included a free-response section for participants to indicate any other factors that they felt played a role in the rejection. Participants rarely used the free-response section to indicate other possible factors, and this will not be discussed further.

RS Scales

After the completion of the rejection attribution task, the RS-A scale was administered to participants ($M = 9.42$, $SD = 4.76$, $\alpha = .75$). RS-race ($M = 7.33$, $SD = 5.23$, $\alpha = .93$) and RS-personal ($M = 10.78$, $SD = 2.98$, $\alpha = .85$) were also administered, as in Study 1.

Results

Mean Levels of Discrimination Attribution in Different Situations

In the remaining analyses we will focus on the attribution of rejection to one's own ethnicity. As expected, participants did not attribute rejection to discrimination in *Irr* situations, ($M = 1.22$, $SD = .60$) but did attribute rejection to discrimination in *Af-Am* situations, ($M = 2.70$, $SD = 1.42$), and in *As-Am* situations, ($M = 2.44$, $SD = 1.18$). Paired-samples *t*-tests revealed that participants attributed rejection to discrimination significantly less in *Irr* situations than in *Af-Am* ($t = 13.67$, $p < .001$, $d = 1.36$) or *As-Am* situations ($t = 14.25$, $p < .001$, $d = 1.30$). Participants did not differ in the attributions of rejection to discrimination in *Af-Am* situations and *As-Am* situations ($t = 1.48$, *ns*).

RS-A and Discrimination Attributions

As predicted, the elevated level of discrimination attribution in the *Af-Am* situations is recognition that discrimination is possible in these situations. Nevertheless, these situations are not as applicable as *As-Am* situations in the experience of discrimination. Consistent with this view, RS-A did not correlate with attributions of rejection to discrimination in *Af-Am* situations, $r = .08$, *ns*, but was positively correlated with attributions of rejection to discrimination in *As-Am* situations, $r = .31$,

$p < .0001$. RS-A did not correlate with discrimination attributions in *Irr* situations, $r = .11$, *ns*.

Discussion

RS-A was related to discrimination attributions among Asian Americans only in those situations where status-based rejection is both applicable and possible (cf. Higgins, 1996; Mendoza-Denton et al., 2002). Specifically, even though Asian Americans' mean discrimination attributions in *Af-Am* situations were similar to those in *As-Am* situations, attributions to discrimination in *Af-Am* situations were unrelated to RS-A. The temporal order of the survey administration, with the rejection attribution task completed before the RS scales, reduced the likelihood of discrimination attribution priming by the RS scales as a possible explanation for the results. Together, these findings show converging evidence that the RS-A scale does indeed measure situation-specific status-based RS.

Studies 1 and 2 established the predictive utility and convergent validity of RS-A in that RS-A was correlated with our psychological wellness variables of interest and also related to spontaneous attributions of rejection to discrimination only in relevant situations. In Study 3, we extend and replicate the findings from Study 2 to test possible affective mediators.

STUDY 3

The typical affective reaction to discrimination is anger among African Americans (Swim, Hyers, Cohen, Fitzgerald, & Bylsma, 2003). Anger is typically seen as an other-directed, externalizing negative emotion (by placing blame on others for injustice; e.g., Lerner & Keltner, 2000). As such, it is unsurprising that exposure to discrimination can lead to hypertension (Blascovich et al., 2001; Harrell, Hall, & Taliaferro, 2003) and externalizing symptomatology among African Americans (Nyborg & Curry, 2003). Indeed, the relationship between subjective experiences of discrimination and externalizing symptomatology in this group is mediated by expressions of anger following discrimination (Nyborg & Curry, 2003).

What would Asian American affective reactions to discrimination be? As Studies 1 and 2 suggest, responses to discrimination among Asian Americans are internalizing rather than externalizing in nature. As such, we might expect a self-directed, negative emotion

to mediate the link between perceptions of discrimination and internalizing outcomes among Asian Americans. We specifically hypothesized that *shame*, being a prototypical internalizing negative emotion (Beer & Keltner, 2004), would be the relevant affective reaction to discrimination for Asian Americans. This expectation is consistent with prior research suggesting that shame may be an especially applicable emotion following interpersonally-communicated rejection due to a stigmatizing condition (Dickerson et al., 2004), and especially so given that Asian Americans experience discrimination in interpersonal contexts more than other American ethnic group members (Greene et al., 2006). In sum then, we hypothesized that Asian Americans' self-directed reactions to discrimination would lead to internalizing symptomatology, analogous to the way that other-directed negative emotion following discrimination is related to externalizing symptomatology among African Americans. Not coincidentally, these are also the symptoms on which Asian Americans and European Americans differ (Okazaki, 1997, 2002; Twenge & Crocker, 2002).

In order to assess Asian American college students' emotional reactions to status-based rejection, we asked them to report both on anger and shame reactions after an imagined rejection in the lab. Because the RS construct inherently contains anxiety as the affect of interest, anxiety was also measured. We used happiness as our positive emotion of choice in order to ascertain differentiation between positive and negative emotions. Furthermore, to explore the relationship between RS-A, emotional reactions to discrimination, and internalizing symptomatology, we also measured self-reported change in self-esteem post simulated rejection.

Procedure

Study 3 was conducted at the same institution as Studies 1 and 2. Study participants were 118 Asian American undergraduates enrolled in psychology classes ($M_{age} = 19.94$, $SD = 1.34$). Forty-two of the 118 Asian Americans were foreign born, having been in the United States for an average of 12.71 years ($SD = 5.57$). The sample was 51% female; 4 participants did not indicate their gender. Participants completed the study for partial course credit.

Rejection Attribution Task

Participants completed a rejection attribution task similar to the measure described in Study 2 but was limited to *As-Am* situations. In Study 3 we included the three highest-loading situations from the RS-A scale, described verbatim to ensure their meanings were not changed by lengthening them. Participants were told that they had been rejected in these situations, to rate their emotions following this event, and to make attributions for the rejection.

Emotion Ratings

Participants were asked to rate their own levels of anxiety, happiness, anger, and shame after the rejection on a scale from 1 (*very little*) to 6 (*very much*). They were also asked to report their change in self-esteem on a 6-point scale, where 1 is *much worse than before*, and 6 is *much better than before*.

RS Scales

As in Study 2, RS-A ($M = 8.12$, $SD = 3.78$, $\alpha = .83$) was administered to participants after the completion of the rejection attribution task. RS-race ($M = 6.29$, $SD = 4.15$, $\alpha = .89$) and RS-personal ($M = 10.28$, $SD = 2.73$, $\alpha = .83$) were also administered to control for the effects of the other two RS scales.

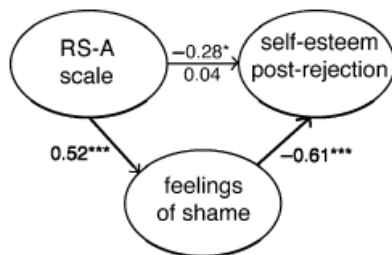
Results

RS-A and Discrimination Attributions

The mean level of discrimination attributions was generally similar to Study 2 ($M = 2.28$, $SD = 1.08$). Replicating the findings in Study 2 among Asian Americans, RS-A was positively correlated with attributions of rejection to discrimination, $r = .19$, $p < .05$.

Emotion Ratings

RS-A was correlated with feelings of shame, $r = .41$, $p < .0001$, self-esteem, $r = -.22$, $p < .05$, and marginally correlated with feelings of anxiety postsimulated rejection, $r = .18$, $p = .06$. However, RS-A was not correlated with post-rejection feelings of happiness, $r = -.12$, *ns*, or anger, $r = .12$, *ns*.



Note: All coefficients are standardized β s.
 $*p < .05$. $***p < .001$.

Figure 1

Mediation analyses with RS-A, shame, and self-esteem in Study 3.

Mediation Analyses

To explore the mechanism through which RS-A relates to postrejection self-esteem, we performed a mediation analysis as recommended by Baron and Kenny (1986). The first step confirmed the effect of RS-A on postrejection self-esteem ($\beta = -.28$, $p < .05$). The second step confirmed the effect of RS-A on shame ($\beta = .52$, $p < .001$). The third step confirmed the effect of shame on postrejection self-esteem, controlling for RS-A ($\beta = -.61$, $p < .001$). As predicted, the relationship between RS-A and postrejection self-esteem was mediated by shame, such that, controlling for shame, RS-A was no longer significantly related to postrejection self-esteem ($\beta = .04$, *ns*). The Sobel test revealed this to be a significant mediation (Sobel's $Z = -3.99$, $p < .0001$). Figure 1 displays this mediation analysis graphically.

Contrary to the externalizing expression of anger towards stigmatizers commonly observed among African Americans as a coping mechanism for discrimination (Swim et al., 2003), Asian Americans internalized the rejection and reported feelings of shame. Furthermore, the internalizing affect reported in this study was related to the internalizing symptomatology measured in the previous studies. This completes the picture: Asian Americans who fear, expect, and perceive discrimination in specific situations interpret negative outcomes as shameful, leading to reduced self-esteem.

GENERAL DISCUSSION

The preceding studies establish that status-based rejection sensitivity is useful in understanding Asian Americans' coping with the possibility of discrimination. Status-based RS among Asian Americans was related to internalizing symptomatology, using both correlational and experimental methodology. These findings showed the utility of measuring anxious expectations, in addition to past discrimination experiences per se, as a factor in explaining the elevated risk of internalizing psychological distress among Asian Americans. Unlike for African Americans, the relevant emotion in coping with discrimination among Asian Americans was shame rather than anger. As other-directed anger mediates the relationship between African American perceptions of discrimination and externalizing symptomatology (Nyborg & Curry, 2003), self-directed shame mediates the relationship between Asian American status-based RS and internalizing symptomatology (Study 3). Although our mediational analysis only included change in self-esteem as the outcome measure, broader applicability to internalizing symptoms is suggested by previous research establishing that trait shame may be positively related to depressive symptomatology (e.g., Thompson & Berenbaum, 2006).

Situation-Specific Outcomes of Status-Based RS

The activation of shame as the relevant emotional reaction to discrimination among Asian Americans might be interpreted as an indication of a culturally specific reaction. Zane and Yeh (2002) report that shame is a common response style among those of Asian cultural backgrounds. As such, one might argue that elevated internalizing symptomatology among Asian Americans may be an artifact of differences between "Western" and "Eastern" cultural orientations and may not reflect maladjustment. If this were the case, however, one should not expect to see situational specificity in affective reactions. Preliminary data show that Asian Americans who attribute rejection to discrimination in situations typically provoking status-based RS in African Americans felt more anger postrejection, $r(118) = .45, p < .0001$. This lends support to our contention that the differences in the negative consequences of status-based RS between Asian Americans and African Americans may be a result of the differing domains where those groups feel stigmatized. It seems prudent to conclude that the differences between Asian American

and other American ethnic groups on well-being may not be solely due to cultural differences but to the type of situation the discrimination occurs in as well.

The findings further show that status-based RS among Asian Americans is distinct from both social interaction anxiety and non-group-specific status-based RS across all situations. While RS-race is uncorrelated with self-esteem in African Americans and Asian Americans, higher RS-A is correlated with lower self-esteem in Asian Americans. This suggests that, although the dynamics of status-based RS (situational triggers → expectations → rejection attributions → affective reactions) may be similar across groups, the nature of the triggers and the psychological sequelae may be group-specific.

Lack of Self-Esteem Protection for Asian Americans

Contrary to the established literature on visible stigma, stigma fails to be a self-protective mechanism for Asian Americans. Because Asian Americans tend to anxiously expect rejection in situations where the prevalent emotional reaction is self-directed and negative in nature, it makes sense that Asian Americans would not be able to credibly discount negative feedback by attributing rejection to the other. There are at least two additional reasons why Asian Americans may be vulnerable to internalizing symptomatology instead of discounting discriminatory feedback. First, interdependence, which tends to be higher among Asian Americans (Markus & Kitayama, 1991; Triandis, 1989), may make it difficult to make discrimination attributions in contexts relevant to stigmatization. Note that this is different from internalization of stigma—theoretically, interdependence should not make a person more likely to believe a given stereotype, but only to feel responsible for not being able to overcome negativity and still have positive social relationships. To the degree that interdependence has been associated with feeling greater responsibility for the smoothness of social interaction, or to maintain positive interpersonal relations, it may be more difficult to blame another person for the negativity of the interaction. On the other hand, Spencer-Rodgers, Peng, Wang, and Hou (2004) found that interdependence alone is insufficient in explaining the lower self-esteem of Asian Americans relative to other American ethnic minority groups, so interdependence may not be adequate in captur-

ing the variance in Asian American psychological distress. Secondly, certain attributes that form part of the Asian American stereotype, such as academic achievement or social ineptitude, may be seen as being malleable, and having a locus of responsibility in the individual. Failure to disconfirm the stereotype, then, is considered a lack of effort on the stigmatized's part or a defect of character (Allport, 1958; Goffman, 1963). In fact, Asian Americans tend to view characteristics such as intelligence as more malleable than fixed (Strage, 1999). As such, Asian Americans may then be blamed for their own plight, not only by society at large but also by themselves. When the responsibility of the stigma is assigned to the target, the target may not be able to credibly claim that a negative event occurred because of discrimination (Crocker et al., 1993; Major et al., 2003). Future studies should examine each of these possible explanations for the lack of self-esteem buffering among Asian Americans.

Limitations

It is worth pointing out that the RS-A in its current form may not capture the situational antecedents that provoke threat to Asian Americans outside of the college context, given that this measure relied on college students in its development. Furthermore, because the RS-A scale was developed at UC Berkeley, where Asian Americans represent the numerical majority ethnic group on campus, the wider applicability of RS-A remains to be tested. On the one hand, this majority context for Asian Americans may have led us to underestimate the effects of institutional discrimination against Asian Americans, such as glass ceiling effects in job settings. On the other hand, because such robust effects of stigma have been found among members of a numerical majority, one might expect status-based rejection effects to be even more robust in contexts where Asian Americans are numerical minorities. Independent of the particular operationalization of RS-A here, however, it is notable that the processes relating to status-based RS may help explain variability in psychological distress among Asian Americans.

Conclusions and Future Directions

Because interpersonal discrimination is such a salient possibility for Asian Americans, whether in academic and professional contexts (Oyserman & Sakamoto, 1997), peer relationship contexts (Greene

et al., 2006), or in romantic contexts (Hamamoto, 1998), it may be fruitful to examine the effects of Asian American status-based RS on the quality and type of intergroup interpersonal outcomes. It may be the case that those high in RS-A, when in an intergroup interaction, actively try to reduce the likelihood they may be discriminated against by sacrificing self-authenticity (see, e.g., Shelton, Richeson, & Salvatore, 2005). Another possibility is that those high in RS-A may be less likely to form social bonds with intergroup partners (similar to Mendoza-Denton et al., 2002, Study 3). A reduction in social connections may in turn restrict job advancement opportunities, contributing to the continued wage depression of Asian Americans compared to European Americans controlling for level of education (U.S. Census Bureau, 2000). Together, these findings suggest that reactions to stigma may play a role in explaining some of the variance within Asian American psychological distress and also mean-level differences between Asian Americans and other ethnic Americans on a host of psychological variables. With future studies on the long-term effects of stigma on Asian Americans, it is hoped that this research can lead to interventions to help Asian Americans cope with the detrimental effects of stigma.

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