Published in final edited form as:

Cultur Divers Ethnic Minor Psychol. 2016 July ; 22(3): 417–431. doi:10.1037/cdp0000083.

Development of an Asian American Parental Racial–Ethnic Socialization Scale

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Abstract

Objective: To develop a measure of parental racial–ethnic socialization that is appropriate for Asian American families.

Method: To test the reliability and validity of this new measure, we surveyed 575 Asian American emerging adults (49% female, 79% U.S. born).

Results: Using exploratory and confirmatory factor analyses, the results show 7 reliable subscales: maintenance of heritage culture, becoming American, awareness of discrimination, avoidance of other groups, minimization of race, promotion of equality, and cultural pluralism. Tests of factorial invariance show that overall, the subscales demonstrate, at minimum, partial metric invariance across gender, age, nativity, educational attainment, parent educational attainment, geographic region of residence, and Asian-heritage region. Thus, the relations among the subscales with other variables can be compared across these different subgroups. The subscales also correlated with ethnic identity, ethnic centrality, perceptions of discrimination, and pluralistic orientation, demonstrating construct validity.

Conclusion: In an increasingly complex and diverse social world, our scale will be useful for gaining a better understanding of how Asian American parents socialize their children regarding issues of race, discrimination, culture, and diversity.

Keywords

Asian American; parental racial–ethnic socialization; scale development

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Thank you to Susie Lamborn, Richard M. Lee, and Alisia G. T. T. Tran for very helpful feedback on the development of this scale.

In a demographically diverse country such as the United States where the Asian American population is steadily increasing (Pew Research Social & Demographic Trends, 2012), socializing children over issues regarding race, ethnicity, and culture continues to be central to their development (García Coll et al., 1996; Hughes et al., 2006). To date, no scale has yet been developed to measure this type of socialization for Asian American families specifically. Thus, the first aim of the study was to do so. The second aim was to test the psychometric properties of this new scale including its reliability, validity, and measurement invariance across key demographic variables.

Parental racial–ethnic[1] *socialization* refers to the "transmission of information from adults to children regarding race and ethnicity" (Hughes et al., 2006, p. 748). The term has been used to capture two distinct socialization processes: racial and cultural socialization (Hughes et al., 2006; Paasch-Anderson & Lamborn, 2014). Racial socialization refers to the ways in which parents teach their children about the meaning that is associated with being of a certain race, such as the fact that one's racial group may be devalued in society and that one should prepare for challenges due to stereotyping and racism. Cultural socialization, on the other hand, highlights the preservation and transmission of cultural practices, traditions, and history. For Asian American immigrant families, cultural socialization will encompass both the heritage culture and majority culture.

The Need for a Parental Racial–Ethnic Socialization Measure for Asian American Families

Compared with African American families, we know much less about the racial and cultural socialization beliefs and practices that parents of other ethnic groups, such as Asian Americans, communicate to their children. Hughes et al.'s (2006) seminal review of 46 racial–ethnic socialization studies showed that most focused predominately on African American families, with only seven including Latino, three including Asian, two including Mixed-ethnic, and one including White families. Further, the most widely used parental racial–ethnic socialization scale by Hughes and Johnson (2001) has been used with diverse groups, including Asian Americans. However, this scale was originally developed from interviews with African American families. Other measures of racial–ethnic socialization have been developed, but also only with African American populations (e.g., T. L. Brown & Krishnakumar, 2007; Stevenson, Cameron, Herrero-Taylor, & Davis, 2002). In these measures, key issues relevant to most Asian American families—such as immigration—are not included. The experience of immigration means that for parents of Asian American children, socialization practices concerning race and ethnicity may include other areas not relevant for families who did not immigrate. Preparing children to deal with discrimination by speaking English without an accent, maintaining transnational ties to family in Asia, socializing children to understand that parents have made important sacrifices to come to the

[1]We use the term "racial" to refer to characteristics of socially defined groups, based primarily on physical characteristics such as skin color, where inequality among groups is emphasized. We use the term "ethnic" to refer to characteristics of socially define groups that are based on a common ancestry, history, and shared values and behaviors (Cokley, 2007). Thus, we use the term "cultural" and "ethnic" interchangeably.

U.S., and facilitating integration into the mainstream culture are important socialization practices not addressed in current racial socialization measures.

Further, rigorous psychometric testing of racial–ethnic socialization scales (such as testing for factorial invariance among diverse Asian American groups) is lacking. Finally, using existing scales of acculturation that measure, for instance, heritage language use or endorsement of heritage culture values are not adequate because they do not capture whether parents are actively socializing their children in these areas. Thus, we aimed to develop a much-needed parental racial–ethnic socialization scale that is tailored to Asian American families. We do so by asking Asian American emerging adults to reflect on their immigrant parents' socialization practices as they were growing up. Children's *perceptions* of parental socialization practices are important to consider as perceptions reveal how parenting is directly experienced (Blyth, 1982; Stevenson et al., 2002). We also aimed to establish the reliability and construct validity of this scale using a diverse sample of Asian American emerging adults. This allowed us to test whether the scale demonstrates factorial invariance along various key demographic dimensions.

Measurement Equivalence Across Key Demographic Variables

To ensure that our scale is interpreted in a similar way across diverse Asian American participants, we conduct factorial invariance testing along several dimensions that may relate to parental racial socialization. One dimension is gender. Males and females may perceive parental racial socialization differently as parents have a greater expectation for females to preserve and carry on cultural traditions rather than males (Dion & Dion, 2001; Suárez-Orozco & Qin, 2006), and females experience less racial discrimination than males (Greene, Way, & Pahl, 2006). Nativity may also affect how parental racial socialization is perceived. For example, the particular ways that Latino mothers promoted cultural socialization in their children differed between those who were foreign-born versus U.S.-born: for Mexican-born mothers, emphasizing religion and engaging in religious activities was an important component of cultural socialization, but for U.S.-born mothers, it was not (Umaña-Taylor & Yazedjian, 2006).

Age may also affect how parental racial socialization is perceived. Because children continue to make meaning of their experiences growing up with immigrant parents even as emerging adults (Kang, Okazaki, Abelmann, Kim-Prieto, & Shanshan, 2010), early emerging adults (18–21 years) may view parental racial socialization differently compared to later emerging adults (22–25 years) as children continue to mature and gain perspective (Min, Silverstein, & Lendon, 2012). Variations in parental racial socialization by educational status (Hughes et al., 2006) and geographic region (Umaña-Taylor & Yazedjian, 2006) have also been found. The West Coast has one of the highest concentrations of Asians in the U.S. (Pew Research Social & Demographic Trends, 2012). Subsequently, participants from this region are more likely to be exposed to greater ethnically dense communities defined by stronger ethnic networks and ethnic institutions (e.g., churches, community centers), which may offer more support and resources for parents to engage in promoting racial and especially ethnic socialization.

Finally, because there are variations among Asian ethnic groups in areas related to racial socialization, such as perceived discrimination (Alvarez, Juang, & Liang, 2006), we compare those with an East Asian (the most common Asian-heritage region of origin) versus other Asian background. Thus, in our study we will compare whether males versus females, those who are born in the U.S. versus foreign-born, younger emerging adults versus older emerging adults, those with only high school versus those with some college education, those with parents who have only high school versus those with some college education, those who live on the U.S. West coast versus other geographic region, and those with backgrounds from East Asia versus other Asian regions, interpret the items of the scale similarly. Establishing factor invariance along such demographic dimensions is a necessary first step to ensure that the scale is usable, interpretable, and meaningful (Knight, Roosa, & Umaña-Taylor, 2009) for diverse Asian American samples.

After establishing factor invariance, we test the construct validity of the scale by correlating it with other measures that should theoretically be related, such as ethnic identity, perceived discrimination, and pluralistic orientation (i.e., appreciating diverse perspectives and people). Previous research suggests that greater parental racial–ethnic socialization is related to stronger ethnic identity among Asian Americans (C. M. Brown & Ling, 2012; Gartner, Kiang, & Supple, 2014; Juang & Syed, 2010; Tran & Lee, 2011). Youth with parents who encourage pride and connection to their heritage culture provide a context for the development of a strong ethnic identity. Youth with parents who promote an awareness and understanding of discrimination—a key aspect of racial socialization—tend to perceive greater discrimination (Alvarez, Juang, & Liang, 2006; Hughes et al., 2008). Youth who have a heightened awareness of discrimination may then prompt their parents into greater discussion and socialization to understand and cope with these experiences (Juang & Syed, 2010). We know of no study that has directly tested the relation of parental racial–ethnic socialization to pluralistic orientation. However, because engaging in discussions of race and ethnicity and interacting with others of diverse backgrounds promote greater pluralistic orientation among college students (Hurtado & DeAngelo, 2012), we expect that youth with parents who engage in discussions of race/ethnicity and/or create opportunities to learn and be exposed to people and communities of diverse backgrounds, would also report greater pluralistic orientation. In sum, we expect our parental racial–ethnic socialization scale to relate positively to youth's ethnic identity, perceptions of discrimination, and pluralistic orientation.

Parental Racial–Ethnic Socialization Among Asian American Families

A review of the literature shows that cultural and racial socialization are usually studied separately for Asian American families. One set of literature emphasizes the importance of socialization goals, beliefs, and practices that are shaped by a consideration and integration of the majority and heritage cultural contexts and values, focusing primarily on cultural socialization and not on racial socialization (Bornstein & Cote, 2003; Cheah, Leung, & Zhou, 2013). Studies of Asian-heritage families show that parents engage in a wide range of parenting practices to promote the learning and maintenance of heritage culture (Choi, Kim, Pekelnicky, & Kim, 2013; Moua & Lamborn, 2010) as well as helping children become integrated into the wider mainstream culture (Portes & Rumbaut, 2001; Zhou, 1997). In

another set of (much smaller) literature focusing predominantly on *racial* socialization among Asian American families, cultural socialization is usually only referring to parental efforts to pass along their heritage culture, resulting in a unidimensional construct that ignores the other important aspect of cultural socialization—that of parental socialization to the majority culture (see French, Coleman, & DiLorenzo, 2013; Liu & Lau, 2013; Tran & Lee, 2010). An integration of these two sets of literature suggests that a racial–ethnic socialization scale for Asian American families should assess practices that support at least three socialization goals: (a) socializing their children to their heritage culture, (b) majority culture, and, because of minority status, (c) how to deal with interpersonal and societal racism and discrimination (Hughes et al., 2006; Phinney & Chavira, 1995).

Although some studies suggest that Asian American parents are less likely than African American or Latino parents to engage in racial–ethnic socialization (Hughes et al., 2008; Phinney & Chavira, 1995; Rivas-Drake, Hughes, & Way, 2009), other studies found that a majority of Chinese American mothers and fathers reported (sometimes or often) talking to children about "what to do if someone insulted or harassed them" and that "they had to do better in school than other people in order to get the same kind of success in the future" (Benner & Kim, 2009, p. 869). Tran and Lee (2010) found that among Asian American college students, 62% percent reported that their parents had engaged in cultural socialization-pluralism (a combination of encouraging an understanding of one's own racial–ethnic group along with emphasizing appreciation of other racial–ethnic groups), 61% reported parental preparation for bias, and 53% reported parental promotion of mistrust. Beyond these few aspects of parental racial socialization, however, we know very little. Also problematic is aggregating different aspects of racial socialization into one composite measure (e.g., cultural socialization-pluralism in Tran and Lee's study), which obscures the distinctions among important aspects of socialization.

Based on this review, we created items in our scale to capture the multidimensional facets of the two broad socialization areas. For cultural socialization we included items to assess both heritage and majority culture socialization (Cheah et al., 2013; Portes & Rumbaut, 2001), and within these two dimensions we included items concerning immigration experiences, ethnic group identification, cultural markers, and ethnic family relations (Moua & Lamborn, 2010; Paasch-Anderson & Lamborn, 2014). For racial socialization we included items to assess the three areas that have been examined before but that have not always been assessed separately (Hughes et al., 2006; Tran & Lee, 2010): preparation for bias and discrimination, promotion of mistrust of other racial groups, and egalitarianism (an emphasis on how all people are equal no matter what racial or cultural background). We also included items to assess promotion of a cultural pluralistic orientation (Engberg & Hurtado, 2011), in other words, how parents foster an appreciation for cultural diversity and different perspectives. And we included items that assessed whether parents minimized race by promoting a colorblind view of the world, for instance, by conveying the message that race does not matter or that their parents avoided discussions about race (Pahlke, Bigler, & Suizzo, 2012). This dimension is usually combined with egalitarianism (e.g., Hughes et al., 2006). However, distinguishing and measuring these multiple dimensions separately is necessary to examine how these dimensions work individually and together in relation to adjustment

(Paasch-Anderson & Lamborn, 2014; Stevenson & Arrington, 2009; Wang & Huguley, 2012).

For Asian American families, a racial–ethnic socialization measure should include both implicit and explicit socialization items. Explicit ways of socializing include, for instance, directly discussing racist events with children. However, because Asian American families may prefer indirect and nonverbal communication (Hwang, 2011), including implicit items for the topic of racial socialization, is desirable. Examples of implicit ways of socializing include modeling behaviors (Pahlke et al., 2012), creating a context promoting family cultural heritage (e.g., decorating with cultural items in the home), and providing opportunities to learn about culture (see Umaña Taylor, 2001). Subsequently, we have included both explicit and implicit socialization items in the scale.

Current Study Aims

The first aim was to develop a reliable and valid parental racial–ethnic socialization scale appropriate for Asian American families. The second aim was to test whether this scale demonstrated factor invariance across gender, age, nativity, education, Asian-heritage region, region of residence, and parental education. Finally, we tested how the scale related to other theoretically relevant measures (ethnic identity, ethnic identity centrality, perceived discrimination, and pluralistic orientation) to establish construct validity.

Method

Participants

The sample included 575 Asian-heritage emerging adults (M_{age} = 22 years, SD = 2.3, range = 18–25) recruited through Qualtrics, an online survey administration company (91%), and a university psychology participant pool (9%). The inclusion criteria were: individuals between the ages of 18 and 25 who had at least one parent of Asian-heritage, who were not international students, and who lived in the U.S. at least from the age of 16.

Most participants were born in the U.S. (n = 453, 79%) versus outside the U.S. (n = 122, 21%). Thirty-seven participants were born in China, 19 in the Philippines, 18 in India, 10 in Korea, 6 in Japan, 9 in Vietnam, 3 in the U.K., 3 in Bangladesh, 2 in Thailand, 2 in Pakistan, and one each in Belize, Brazil, Canada, Guyana, Myanmar, Paraguay, Saudi Arabia, Singapore, Sri Lanka, and Taiwan. Of those born outside of the U.S., the average length of time living in the U.S. was 13.9 years, SD = 5.7.

About half of the participants were female (n = 284, 49%) versus male (n = 291, 51%). Participants had backgrounds from East Asia (n = 281, 49%), Southeast Asia (n = 208, 36%), and South Asia (n = 64, 11%). Four percent (n = 21) did not specify an Asian country of heritage. See Table 1 for frequencies of specific Asian heritage background. Based on the U.S. Census Bureau regional classification, almost half were living in the Western part of the U.S. (n = 273, 47%), 22% (n = 128) from the Northeast, 17% (n = 100) from the South, and 13% (n = 76) from the Midwest. Participants on average obtained a 2-year associate degree.

All participants indicated they had a mother/mother figure whereas 16 (3%) indicated they did not have a father/father figure. Most of the mothers (n = 497, 86%) and fathers (n = 434, 76%) were born outside the U.S. Parents' highest educational attainment was between obtaining a 2-year associate degree and a bachelor's degree.

We conducted chi-square tests to compare the university sample to the Qualtrics sample. The two samples did not differ significantly in gender distribution, Asian-heritage region (East Asia vs. South or South East Asia), or parental education. However, compared with the Qualtrics sample, the university sample was more likely to be younger, $\chi^2(1, N = 575) = 60.1$, $p < .001$, born in the U.S., $\chi^2(1, N = 575) = 7.6$, $p = .004$, have a high school diploma only, $\chi^2(1, N = 575) = 78.1$, $p < .001$, and be from the Western part of the U.S., $\chi^2(1, N = 575) = 61.0$, $p < .001$. Despite the demographic differences, independent samples t tests showed that the two samples did not significantly differ on any of the subscales of the Asian American parental racial–ethnic socialization measure and validation measures (ethnic identity, ethnic identity centrality, pluralistic orientation, and perceived peer discrimination).

Procedure

For the university sample, students were recruited from the psychology department participant pool. Links to the online survey were sent to those who were interested and met the inclusion criteria (self-identifying as Asian-heritage, between the ages of 18 and 25, and not international students). Students who completed the survey were compensated with course credit. For the Qualtrics sample, a link was sent to a nationwide panel of individuals who met the inclusion criteria as noted above. Participants received credit for completing the survey, which they could convert to monetary pay. Respondents indicated consent to participation by continuing on with the survey after reading the initial page with the study and implied consent information. The information stated that the researcher was interested in how Asian Americans learned about their culture and issues related to race and ethnicity. They were told they could stop participation at any time and were given the researchers' contact information if they had any questions. All procedures and measures of the study were approved by the first author's university institutional review board. Because we focused on noninternational students, all measures in the survey were administered in English.

Measures

Asian American parental racial–ethnic socialization.—Based on the literature, existing parental socialization scales (e.g., Hughes & Johnson, 2001), and six focus groups with Asian American college students, an initial pool of 81 items was developed to correspond to several areas of parental racial–ethnic socialization. The six focus groups (n = 33) were part of a different study that focused on racial/ethnic discrimination. The main goals of that study were to address how and from whom do Asian American individuals learn and come to think about issues of race and discrimination. Questions asking participants about parental socialization included: Do you think most Asian-heritage parents teach their children how to deal with racial/ethnic discrimination? If so, what things do they say/do? Have you ever asked your parents about racial/ethnic discrimination and prejudice? What did you ask them and what did they say? All focus groups were audio-recorded and

then transcribed. Based on a review of these transcriptions, we created items of specific racial and cultural socialization practices that were mentioned in the focus groups. One advantage of using focus group data was that we could write items that were based directly on Asian American individuals' wording of their own experiences, such as "Told you that your culture is better than other cultures."

The research group discussed each of the initial items and discarded 16 items that overlapped, were unclear, or poorly worded. The resulting 65 items were sent to four academic experts on Asian American parental socialization for review. The four experts reviewed each item and marked whether the item was clearly understandable (e.g., the wording was clear and those we designated as implicit or explicit appeared so), and how relevant each item was for each area of racial/ethnic socialization. They also provided feedback on whether the items and areas represented the entire construct of racial–ethnic socialization without ignoring important features/dimensions. Based on the experts' detailed review, we clarified wording, deleted items, and created new items to capture a broader range of specific socialization practices, ending up with 75 items total.

The content of these 75 items generally fell into six initial domains: maintenance of heritage culture, becoming American, awareness of discrimination, avoidance of outgroups, promoting equality, and cultural pluralism. Participants responded to the items, with the item stem of "One way we learn about culture and ethnicity is through our parents. Please indicate if one or more of your parents have engaged in each of the following activities, and if so, how frequently." The response scale ranged from 1 (*never*) to 5 (*very often*). Means of item scores ranged from 1.66 to 4.55, and the standard deviations of the items ranged from 0.74 to 1.53.

Ethnic identity.—Ethnic identity was measured using the 6-item Multi-Group Ethnic Identity Measure-Revised (MEIM-R, Phinney & Ong, 2007). A sample item is "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs." The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Mean scores were calculated such that higher scores indicated stronger ethnic identity ($\alpha = .90$ for the current sample). The MEIM demonstrates reliability and validity for use with Asian Americans (Avery, Tonidandel, Thomas, Johnson, & Mack, 2007; Phinney & Ong, 2007) and is correlated positively with self-esteem, social connectedness, sense of purpose in life, and self-confidence (Juang, Nguyen, & Lin, 2006; R. M. Lee & Yoo, 2004; Martinez & Dukes, 1997).

Ethnic identity centrality.—Ethnic identity centrality was measured using the 8-item centrality subscale of the Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997). A sample item is "In general, being part of my ethnic group is an important part of my self-image." The response scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*). Some items were reverse-coded and mean scores were calculated so that higher scores indicated greater ethnic identity centrality ($\alpha = .85$ for the current sample). Although originally created for African American samples, the MIBI demonstrates reliability and validity for use with Asian Americans, correlating positively

with academic attitudes and family cultural socialization (French et al., 2013; Fuligni, Witkow, & Garcia, 2005; Rivas-Drake et al., 2009).

Pluralistic orientation.—Pluralistic orientation, or how individuals think and behave in a diverse environment, was measured using Engberg and Hurtado's (2011) 5-item scale. A sample item is "I know how to work cooperatively with diverse people." The response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Mean scores were calculated so that higher scores indicated greater pluralistic orientation (α = .77 for the current sample). This scale demonstrates reliability and validity for use with diverse college students, including Asian Americans, correlating negatively with intergroup anxiety and positively with positive interactions with others of different backgrounds (Engberg & Hurtado, 2011).

Perceived peer discrimination.—Discrimination was assessed using eight items from Way (1997). The stem read "Think about other students in school when you were growing up." Participants responded to items such as "How often did other students make fun of you because of your race or ethnicity?" on a scale ranging from 1 (*never*) to 5 (*all of the time*). Mean scores were calculated so that higher scores indicate greater discrimination by peers (α = .96 for the current sample). This scale demonstrates reliability and validity for use with Asian American adolescents and college students, correlating positively with depressive symptoms, somatization, loneliness, and negatively with self-esteem (Greene et al., 2006; Juang, Ittel, Gottwald, & Gallarin, in press).

Demographic variables.—Participants reported their gender, age, nativity, educational attainment, Asian-heritage region, geographic region of residence, and mother and father education. Variables that had more than two categories were further dichotomized for the purpose of measurement invariance testing (see Table 4 for distributions of the dichotomized demographic variables).

Analytic Approach

We first randomly split the sample into two subsamples for separate examinations of exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). We split our sample into two subsamples of n = 373 for the EFAs and n = 202 for the CFAs. Two rules of thumb guided our decision on the sizes of split samples, which require that (a) at least 300 cases be used for exploratory factor analysis (Comrey, 1973), and (b) the minimum ratio of participants to items be 5:1 (Gorsuch, 1983). The split of 373 and 202 not only ensures an adequate sample size for the EFAs, but also leaves an acceptable sample size for subsequent CFAs.

Before conducting the analyses, we checked for missing data. There was very little; fewer than 1% of the values were missing. In Mplus analyses, missing data are accounted for by using the full-information maximum likelihood (FIML) approach, which analyzes all available information from the covariance matrix when some variables have missing values (Enders, 2001).

We then conducted a series of analyses using Mplus (Muthén & Muthén, 1998–2015). First, EFAs with the first subsample of 375 were conducted to examine the underlying

dimensionality of the item set and to refine it. Second, a series of simple structure CFAs were conducted with the second subsample of 202 to test whether measurement models for each factor fit the data well. Items were further dropped based on model fit and theoretical considerations. Third, still using the second subsample of 202, separate CFAs were conducted across the seven demographic grouping variables: gender, age, nativity, educational attainment, parent educational attainment, Asian-heritage region, and geographic region of residence, to determine whether the measurement models fit the data well for each of the 14 demographic subgroups. Problematic items were dropped (e.g., items that were very highly correlated with other items), which resulted in the final set of items. Fourth, using the final set of items and the entire sample of 575, we conducted a series of factorial invariance tests across the seven demographic variables. For all tests reported in this study, we relied on three indices of goodness of fit: chi-square, root mean square error of approximation (RMSEA), and comparative fit index (CFI). For the latter two indices, the recommended cut-off values are: RMSEA values of .06 or below and CFI values of .95 or above (Hu & Bentler, 1999).

For factorial invariance testing, multiple group CFAs were conducted using Wald tests to test for the four sequential levels of factorial invariance: configural, metric, strong, and strict invariance (T. A. Brown, 2006; Vandenberg & Lance, 2000). A lower level of invariance was established first so that subsequent tests would be meaningful (e.g., tests of metric invariance were conducted only if configural invariance was established). For the test of configural invariance, goodness of fit was examined for measurement models specified across multiple groups. The tests for metric invariance were conducted to determine whether the values of factor loadings for all items were invariant. Because the items were ordered categorical, strong invariance was tested with the comparisons of thresholds of all items across groups (Millsap & Yun-Tein, 2004). Strict invariance was obtained when the unique variances of all items were invariant across groups. For all parameter specifications, we followed the guidelines provided by Millsap and Yun-Tein (2004). For the use of the scales to be meaningful, at least partial metric invariance is required (Byrne, Shavelson, & Muthén, 1989). Hence, for factors that failed to reach full metric invariance, factor loadings that were significantly different across groups were freed to obtain partial metric invariance.

Because the 5-point Likert response scale consisted of ratings from *never* to *very often*, we treated them as ordered categorical measures, rather than continuous, to improve the accuracy of the analyses. Accordingly, we used the mean- and variance-adjusted weighted least squares (WLSMV) estimator for all of the analyses, which provides robust estimations for categorical CFAs (Flora & Curran, 2004). In some cases of multiple group factor analysis, responses for a certain category of an item were not obtained for one of the groups; in such cases, categories were collapsed for that particular model (e.g., ratings of "*never*" and "*rarely*" were collapsed into a single category for all participants if, for instance, no females reported "*rarely*" on an item).

Results

Factor Analysis

EFAs were conducted with a random subsample of 375 using the refined pool of 75 items with an oblique rotation, which suggested an eight factor model (RMSEA = .04, CFI = .96, eigenvalue = 1.47). However, only seven factors were conceptually meaningful. Items that were theoretically not relevant to the corresponding factors, had low loadings on all factors (<.32), or cross-loaded on multiple factors (loading difference < .15) were deleted (Worthington & Whittaker, 2006) resulting in a total of 62 items. The factors were named *maintenance of heritage culture, becoming American, awareness of discrimination, avoidance of outgroups, minimization of race, promotion of equality*, and *cultural pluralism* (see Table 2).

Simple structure CFAs for seven factors were then conducted for the second subsample of 202. An additional 20 items were deleted if the items had (a) overly high conceptual overlap with other items (e.g., parents taking the participants to places/events of other cultures and parents taking the participants to stores/public places of other cultures) and (b) overly high correlations with other items suggested by modification indices (e.g., parents speaking in their heritage language and parents telling the participants to speak in their heritage language). We further examined whether the measurement models fit the data well for 14 demographic subgroups obtained by dividing the sample across seven dummy-coded demographic variables. As some of the subgroups had small sample sizes (e.g., the subgroup that were foreign-born or the subgroup whose parents only had a high school degree or lower), we did not made any item-deleting decisions based on model fit with these subgroups. At this stage, 11 items were further dropped based on the following criteria: (a) for theoretical considerations of potential measurement nonequivalence across subgroups (e.g., dating behavior for females and males); (b) modification indices (e.g., when modification indices suggested that two items were highly correlated in at least one subgroup, one or both of the items were deleted based on theoretical consideration).

Final CFA results are presented in Table 3. All subscales showed adequate to good reliability with Cronbach's αs ranging from .71 to .90. Given our conceptualization of the scale as a multidimensional measure, we further compared a one-factor model that included all of our final items versus a seven-factor model, in which seven factors specified in the separate CFAs were combined and correlated. The seven-factor model, $\chi^2(413) = 826.506$, $p < .001$; RMSEA = .07; CFI = .95, indeed fit better than the one-factor model, $\chi^2(434) = 4428.25$, $p < .001$; RMSEA = .21; CFI = .54. A Wald test further confirmed that the difference was statistically significant, $\chi^2_{\text{diff}}(21) = 5223.90$, $p < .001$.

Factorial Invariance Analysis

Various levels of invariance were observed (see Table 4) across the seven demographic variables, including 4.1% partial metric invariance, 20.4% metric invariance, 30.8% strong invariance, and 36.7% strict invariance. For the two tests that failed to reach full metric invariance, we were able to obtain partial metric invariance by freeing only one factor loading. Among the factors, we observed the strongest invariance for the factor *minimization*

of race, as it reached strict invariance across six out of the seven demographic variables. Additionally, factors *awareness of discrimination, avoidance of outgroups*, and *cultural pluralism* also showed high levels of invariance (strong and strict) across most of the demographic variables. In contrast, we observed more nonequivalence for factors *maintenance of heritage culture* and *becoming American*. Among the demographic variables examined, factors were more equivalent across different age groups (mostly strict) and relatively less equivalent across gender and parental education (*avoidance of outgroups* only reached partial metric invariance for gender; *becoming American* only reached partial metric invariance for parental education). Nonetheless, all invariance tests reached at least partial metric invariance, indicating that relations between the scale and other variables can be compared across various groups: between males and females, younger emerging adults and older emerging adults, U.S. born and foreign born, East Asian heritage region and other Asian region, West coast versus other, those who are less versus more educated, and whose parents are less versus more educated.

Descriptive Statistics and Validity Estimates

Given that all seven factors showed stable factor structures and equivalence across various subgroups of the sample, we created subscales by averaging all items for each factor. Descriptive statistics and zero-order correlations are provided in Table 5. Intersubscale correlations ranged from nonsignificant to moderate. Correlations with the validity measures showed meaningful patterns. For ethnic identity centrality, greater heritage cultural practices, awareness of discrimination, and cultural pluralism positivity correlated, whereas promotion of equality, minimization of race, avoidance of other races, and becoming American did not, suggesting discriminant validity of the subscales. For ethnic identity (MEIM-R), maintenance of heritage culture was the most strongly positively correlated while avoidance of outgroups did not relate. For perceived discrimination, the awareness of discrimination subscale correlated the most positively and strongly while becoming American and promotion of equality were not correlated. For pluralistic orientation, promotion of equality correlated the most positively and strongly whereas avoidance of outgroups correlated negatively. Thus, the subscales of the racial–ethnic socialization measure related to ethnic identity, perceived discrimination, and pluralistic orientation in ways that were consistent with what we expected based on previous studies.

Discussion

In an increasingly diverse and interconnected world (Friedman, 2005), understanding how parents are socializing their children regarding issues of culture, ethnicity, and race, is critical for illuminating how children can best adapt and grow (García Coll et al., 1996; Hughes et al., 2006). Parents need to know how to prepare their children to face challenges such as experiencing interpersonal and societal discrimination, and also to raise children who can embrace diverse perspectives and get along with diverse people to become a competent member of a globalized social world (Engberg & Hurtado, 2011). To better understand parental racial–ethnic socialization, appropriate measures are needed. Our scale, therefore, fills a gap in the literature with the development of a parental racial–ethnic socialization scale that is appropriate for Asian American families.

Our multidimensional Asian American Parental Racial–ethnic Socialization measure (AAPRES) includes seven stable and reliable subscales: maintenance of heritage culture, becoming American, awareness of discrimination, avoidance of outgroups, minimization of race, promotion of equality, and cultural pluralism. All seven subscales demonstrated, at minimum, factorial invariance at the partial metric level across sample variability based on age, nativity, educational attainment, parent educational attainment, Asian-heritage region, and region of residence. Subsequently, relations between the seven subscales to other variables (such as testing how parental racial–ethnic socialization is related to academic and social adjustment) can be compared across these different groups.

Our scale includes seven distinct dimensions that capture a broader range of parental racial–ethnic socialization areas compared to existing measures. One important distinction is among the three subscales of cultural pluralism, promotion of equality, and minimization of race. By minimization of race, we are tapping into parents who may endorse a colorblind ideology (Pahlke et al., 2012). Denying that racism exists, communicating that race does not matter, and being uncomfortable discussing issues of race with their children may be counterproductive to their children's understanding of race-related issues (Davis & Stevenson, 2006; Stevenson & Arrington, 2009). Minimizing race is different from promotion of equality, the idea that all people are equal and deserve equal treatment. Cultural pluralism goes further, and promotes an appreciation of diverse perspectives and peoples. Our study shows that greater promotion of equality and cultural pluralism, but not minimization of race, were associated with greater pluralistic orientation. Promotion of equality and cultural pluralism may be important areas of socialization that best prepare children with skills to do well in increasingly diverse school, work, and community contexts (Engberg & Hurtado, 2011).

It is noteworthy that final items include both explicit and implicit socialization. One important implicit socialization practice is parental modeling. Modeling behaviors can be powerful, as one study found that parental modeling of behavior (e.g., having cross-racial friends) predicted children's racial biases and attitudes, but parental attitudes (e.g., holding positive attitudes toward cross-racial friendships), did not (Pahlke et al., 2012). Our scale for Asian Americans includes these important parental modeling of behaviors that represent implicit socialization, such as whether parents had close friends who were American. It remains to be seen whether implicit versus explicit socialization practices in specific areas are more important for children's cultural and racial understanding.

The parental socialization subscales correlated moderately with one another, with the highest correlation between promotion of equality and cultural pluralism. However, these two aspects of socialization showed different patterns of correlation with other variables. Promotion of equality correlated positively with ethnic identity (MEIM) and pluralistic orientation, yet cultural pluralism was additionally correlated with greater ethnic centrality and greater perceived discrimination. It is important to note that encouraging an appreciation for diversity and an awareness of cultures is linked to stronger and more central ethnic identity and also greater perceived discrimination. Thus, aspects of parental racial–ethnic socialization are linked to both positive development such as stronger ethnic identity and also negative experiences such as greater perceived discrimination. Assessing parental

racial–ethnic socialization more precisely will be important to be able to pinpoint what specific aspect of socialization is related to what specific aspect of development and adjustment.

According to our findings, what do Asian-heritage parents do? They emphasize passing on cultural heritage (showing the highest average score of all the subscales). They also engage in socializing children into becoming American, in promoting appreciation for other cultures, and promoting the idea that all races and ethnicities are equal (the average scores for these subscales were between 3 and 4, between “sometimes” and “often”). They seem to be less engaged in promoting an awareness of discrimination (the average score for this subscale was 2.53, between “rarely” and “sometimes”). And they were least engaged in minimizing race and avoiding outgroups (the average scores for these subscales were about 2, “rarely”). These scores may reflect real differences in prevalence of socialization patterns. However, some of the variation may be attributable to the items. For instance, all four of the awareness of discrimination items measured explicit socialization as none of the initial implicit items loaded on the final model. Perhaps it is more difficult to capture implicit ways that parents make children aware of discrimination (Hughes et al., 2006). Not including implicit items of discrimination, however, may partially explain why parents may have scored lower on this subscale. Alternatively, it may also mean that parents are indeed less engaged with making their children aware of discrimination because it may be a difficult topic to discuss.

Limitations That Point to Future Research Directions

There are some limitations of our study which point to many interesting future directions. Our scale focuses on socialization by parents, who are undoubtedly one of the most important sources of socialization regarding issues of culture and race (Hughes et al., 2006; Moua & Lamborn, 2010). But because family constellations are increasingly diverse and consist of more than just the child and parents, future studies should examine how other key sources of socialization contribute to children’s understanding of race and discrimination such as grandparents, siblings, and other extended family members. Adapting our scale to assess these additional socialization agents to move beyond the traditional parent–child family system would capture a greater diversity of family situations. By adopting a more systemic approach to socialization, researchers could then examine how different sources of socialization work together with, in contrast to, or in conflict with parents. It is also unclear whether our scale would work differently for children with a migration pattern involving short- or long-term separation from one or both parents. Asian American parental racial and cultural socialization for astronaut families (one parent, usually the mother, accompanies the child to the new country while the other parent stays behind) and parachute families (children who are sent to stay with relatives or friends of the family in the new country to attend school while both parents stay behind) would also be important to study further as these are not uncommon family constellations for Asian-heritage families (H.-H. Lee & Friedlander, 2014; Tsong & Liu, 2009).

Our scale was developed focusing on Asian American adolescents and emerging adults with immigrant parents. Future research could compare how those with U.S.-born Asian-heritage

parents (second generation parents) may differ in perceptions of racial–ethnic socialization. U.S.-born parents would perhaps emphasize racial socialization more so than immigrant parents who may have migrated from more racially homogenous countries and/or be less familiar with the race dynamics of the United States. U.S.-born parents may have more similar experiences of discrimination with their children and thus may be more comfortable in openly discussing and preparing their children regarding discrimination. Immigrant parents, on the other hand, may be more focused on adjusting to the new country and ensuring the fulfillment of other socialization goals such as academic success (Chao, 2001). Studies that compare U.S.- versus foreign-born immigrant parents are needed to examine how parental socialization practices and effects may change across subsequent generations.

Our measure assesses how young people perceived what their parents did. Future studies should also assess mothers and fathers themselves to see how their socialization efforts align with what their children perceive. What parents see as explicit efforts to teach their children about the importance of being aware of discrimination, or of appreciating people from all different backgrounds, may not be perceived and interpreted in the same way by their children (Stevenson & Arrington, 2009). It would also be interesting to look longitudinally to see how socialization strategies and emphases may change over time over the course of childhood and adolescence. During adolescence, perceptions of discrimination increase (Greene et al., 2006), suggesting that parents may need to increase their racial socialization efforts during this period of development.

We provided preliminary evidence for the validity of our measure with related but conceptually distinct constructs. Future studies could additionally test how the measure similarly or differentially relates to other constructs across specific demographic subgroups. One important area that we did not assess was acculturation/enculturation strategies. Further work should test whether the subscales of becoming American and maintenance of heritage culture has predictive value over and above parental acculturation. Because socialization includes implicit practices such as modeling behaviors, the items in the becoming American subscale imply that these are parents who are more oriented toward mainstream American culture and, consequently, are implicitly providing a role model of cultural engagement for their children. The measure, however, should ideally distinguish parental socialization versus parental acculturation. Further, more detailed information on the parents (or other key parental figures) such as presence and availability in the child’s life, parents’ own experiences with discrimination in the U.S., strength of ethnic and national identity, frequency of travel to heritage country, and reasons for migration, would be useful to include in future studies. Accounting for a more detailed picture of the experiences of the parents would help us better understand the engagement and motivation behind their racial–ethnic socialization practices. Future studies could also test whether our scale adds unique variance beyond existing measures of racial socialization in predicting ethnic identity, discrimination, pluralistic orientation, and other adjustment measures (e.g., self-esteem, academic achievement, social competence).

Most racial socialization scales rely on retrospective accounts of parenting. What varies is the time frame. Participants are asked to report on parent socialization practices that happened in the past year (e.g., Hughes & Johnson, 2001), growing up (e.g., C. M. Brown &

Ling, 2012), and in their lifetime (e.g., Tran & Lee, 2010). Our scale was tested with Asian American emerging adults' perceptions of parental socialization while they were growing up, as other studies have done (Brown & Ling, 2012). We found that experiences reported retrospectively correlated with emerging adults' current ethnic identity and pluralistic orientation. Because relationships are built over time, through a history of daily interactions and communications with family members (Youniss & Smollar, 1985), finding that retrospective accounts relate to current development is consistent with this view. From a life span perspective on socialization, assessing perspectives on parenting at different developmental periods is needed to understand how perceptions change as children become older, more mature, and enter into different social roles with different responsibilities (Min et al., 2012).

Conclusion

Our study provides initial support for the reliability and validity of our measure of parental racial–ethnic socialization for Asian American families. Notably, our scale includes both explicit and implicit socialization items and a broad range of dimensions that take into account the immigration experience and other dimensions not assessed (e.g., minimization of race) or usually aggregated (e.g., promotion of equality with cultural pluralism) in other racial socialization measures. Further, the stable and reliable factor structure and factorial invariance across seven demographic dimensions suggest that this scale is appropriate for use with diverse Asian American families. Understanding how and what parents teach their children about diversity, discrimination, and culture, in addition to the typical socialization areas (such as academic achievement, Chao, 2001) that have been traditionally studied among Asian American families, will be critical as the world becomes increasingly socially interconnected.

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Table 1

Specific Asian Heritage of Participants (N = 575)

Heritage	Frequency (Percent)
East Asian	281 (49%)
China	139
Taiwan	44
Korea	37
Japan	35
Hong Kong	26
Southeast Asian	208 (36%)
Vietnam	84
Philippines	80
Cambodia	13
Laos	11
Thailand	9
Indonesia	5
Myanmar	3
Malaysia	3
South Asian	64 (11%)
India	49
Pakistan	7
Bangladesh	5
Sri Lanka	2
Nepal	1
Asian with no specific heritage country indicated	21 (4%)

Table 2

Exploratory Factor Analysis for Youth Report of Asian American Parental Racial/Ethnic Socialization

Factor/Item	Loading
1. Maintenance of heritage culture (15 items)	
Told you to speak in their heritage language.	.71
Spoke regularly to you in their Asian-heritage language.	.71
Encouraged you to be proud of your culture.	.71
Told you to never lose your culture.	.69
Routinely cooked Asian food for you.	.66
Showed you that because they are immigrants they have worked hard to come to this country.	.66
Showed you that it's important to spend time with people who are also of Asian background.	.64
Celebrated your heritage culture's holidays.	.63
Spent time with relatives who are from their home country.	.63
Used "ethnic" media (e.g., newspapers, books, TV shows).	.60
Visited stores and professionals (such as doctors, business owners) of their own ethnicity/culture.	.59
Told you that you are more Asian than American.	.59
Took you to visit their home country.	.52
Lived in a community with people of the same cultural background.	.45
Attended an "ethnic" church (e.g., Korean church, Taiwanese church).	.37
2. Becoming American (6 items)	
Felt comfortable speaking English.	.72
Had close friends who were Americans.	.70
Invited American people over to your house.	.68
Spent time with Americans.	.68
Routinely cooked American food for you.	.55
Celebrated American holidays.	.54
3. Awareness of discrimination (11 items)	
Talked to you about why some people will treat you unfairly because your Asian background.	.91
Told you that you have to work a lot harder in order to get the same rewards as others because of your Asian background.	.89
Told you that people may try to take advantage of you because of your Asian background.	.86
Talked to you about a time when they were treated unfairly because they are Asian.	.85

Factor/Item	Loading
Told you that people may limit you because of your Asian background.	.79
Talked to someone else about racial/ethnic discrimination when you could hear them.	.72
Showed you what to do if you experience unfair treatment because of your Asian background.	.72
Explained something in the media (TV, books, movie, internet, news) to you that showed unfair treatment against Asian people.	.65
Told you that people will have expectations about your abilities because you are Asian.	.59
Told you that if you experience unfair treatment because of your Asian background you should ignore it.	.58
Told you that you have to speak good English in order to avoid being treated unfairly.	.56
4. Avoidance of outgroups (12 items)	
Showed you that you should not be friends with people of certain racial/ethnic backgrounds.	.98
Encouraged you to keep a distance from people of other races or ethnicities.	.97
Showed you that you cannot trust people of other races or ethnicities.	.96
Done things to show you that other race/ethnic groups are dangerous.	.89
Told you to avoid another racial or ethnic group.	.89
Moved away from sitting or standing next to a person of another race.	.81
Told you that you should not date someone from certain racial or ethnic backgrounds.	.75
Told you to be careful around different racial groups.	.73
Made comments to you that stereotyped other racial or ethnic groups.	.73
Told you that your culture is better than other cultures.	.69
Talked to you about the dangers of American culture.	.62
Showed disapproval of American culture.	.60
5. Minimization of race (3 items)	
Told you that racism doesn’t exist.	.81
Gave you the impression that issues of race and racism were not important.	.68
Gave you the impression that they were not comfortable talking about issues of race.	.44
6. Promotion of equality (5 items)	
Told you that all people are equal regardless of their racial or ethnic background	.76
Treated all of your friends in the same way regardless of their racial or ethnic background.	.67
Treated people of other races/ethnicities all in the same way.	.66
Showed you that all people are equal regardless of race or ethnicity.	.64
Told you that race or ethnicity is NOT important in choosing friends.	.63
7. Cultural pluralism (9 items)	

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Factor/Item	Loading
Talked to you about important people or events in the history of racial/ethnic groups other than your own.	.84
Took you to places or events that celebrated cultures other than your own (museums, festivals).	.82
Told you that it's important to be exposed to people who have different viewpoints than you do.	.79
Showed you that it's important to spend time with people who are of other race/ethnicities.	.79
Took you to neighborhoods, stores or other public places where you saw people of cultures/ethnicities different than your own.	.73
Discussed the importance of racial/ethnic diversity.	.63
Encouraged you to have friends from other racial/ethnic backgrounds.	.63
Showed you that you should be open-minded about other people's opinions, regardless of racial or ethnic background.	.61
Took you to restaurants or prepared meals with food of different cultures.	.61

Table 3

Confirmatory Factor Analysis for Youth Report of Asian American Parental Racial/Ethnic Socialization

Factor/Item	$\chi^2(df)$	RMSEA	CFI	λ
1. Maintenance of heritage culture (9 items)	76.76 (27)	.06	.98	
Routinely cooked Asian food for you.				.65
Spent time with relatives who are from their home country.				.62
Told you to speak in their heritage language.				.78
Visited stores and professionals (such as doctors, business owners) of their own ethnicity/culture.				.70
Showed you that because they are immigrants they have worked hard to come to this country.				.73
Celebrated your heritage culture's holidays.				.66
Used "ethnic" media (e.g., newspapers, books, TV shows).				.63
Took you to visit their home country.				.58
Encouraged you to be proud of your culture.				.63
2. Becoming American (4 items)	1.81 (2)	.00	1.00	
Had close friends who were Americans.				.93
Spent time with Americans.				.83
Felt comfortable speaking English.				.80
Invited American people over to your house.				.89
3. Awareness of discrimination (4 items)	1.71 (2)	.00	1.00	
Talked to you about why some people will treat you unfairly because your Asian background.				.92
Told you that people may try to take advantage of you because of your Asian background.				.87
Told you that people may limit you because of your Asian background.				.84
Told you that you have to work a lot harder in order to get the same rewards as others because of your Asian background.				.86
4. Avoidance of outgroups (4 items)	.50 (2)	.00	1.00	
Told you to avoid another racial or ethnic group.				.85
Moved away from sitting or standing next to a person of another race.				.81
Showed you that you cannot trust people of other races or ethnicities.				.94
Showed you that you should not be friends with people of certain racial/ethnic backgrounds.				.97
5. Minimization of race (3 items)	—	—	—	
Gave you the impression that they were not comfortable talking about issues of race.				.51
Told you that racism doesn't exist.				.90

Factor/Item	$\chi^2(df)$	RMSEA	CFI	λ
Gave you the impression that issues of race and racism were not important.				.81
6. Promotion of equality (3 items)	—	—	—	
Showed you that all people are equal regardless of race or ethnicity.				.95
Told you that race or ethnicity is not important in choosing friends.				.84
Treated people of other races/ethnicities all in the same way.				.77
7. Cultural pluralism (4 items)	5.69 (2)	.06	1.00	
Encouraged you to have friends from other racial/ethnic backgrounds.				.86
Discussed the importance of racial/ethnic diversity.				.88
Showed you that it's important to spend time with people who are of other race/ethnicities.				.88
Showed you that you should be open-minded about other people's opinions, regardless of racial or ethnic background.				.79

Note. Model fit indices for subscales Minimization of Race and Egalitarianism were not available because of model saturation.

Table 4

Factorial Invariance Tests for Asian American Parental Racial/Ethnic Socialization Subscales Across Seven Demographic Variables

	Gender (Male: 51%; Female: 49%)						Age (18–21: 42%; 22–25: 58%)				
Model	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**	**Model**	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**
Maintenance of heritage culture											
Configural	135.79 (54)	—	—	.07	.97	Configural	137.94 (54)	—	—	.07	.97
Metric	**120.52 (62)**	**2.96 (8)**	**.94**	**.06**	**.98**	Metric	146.47 (62)	8.96 (8)	.35	.07	.97
Strong	155.74 (87)	50.73 (25)	.00	.05	.98	Strong	154.97 (88)	32.61 (26)	.17	.05	.98
Strict	—	—	—	—	—	**Strict**	**163.68 (97)**	**8.07 (9)**	**.53**	**.05**	**.98**
Becoming American											
Configural	2.44 (4)	—	—	.00	1.00	Configural	5.13 (4)	—	—	.03	1.00
Metric	10.94 (7)	5.90 (3)	.12	.04	1.00	Metric	7.68 (7)	2.58 (3)	.46	.02	1.00
Strong	**25.60 (18)**	**18.96 (11)**	**.06**	**.04**	**1.00**	Strong	20.33 (18)	9.14 (11)	.61	.02	1.00
Strict	38.69 (22)	23.55 (4)	.00	.05	1.00	**Strict**	**26.87 (22)**	**4.76 (4)**	**.31**	**.03**	**1.00**
Awareness of discrimination											
Configural	2.30 (4)	—	—	.00	1.00	Configural	2.64 (4)	—	—	.00	1.00
Metric	7.95 (7)	3.32 (3)	.35	.02	1.00	Metric	3.73 (7)	1.13 (3)	.77	.00	1.00
Strong	**19.53 (18)**	**12.42 (11)**	**.33**	**.02**	**1.00**	Strong	17.43 (18)	19.22 (11)	.06	.00	1.00
Strict	79.39 (22)	149.97 (4)	.00	.10	.99	**Strict**	**23.62 (22)**	**7.07 (4)**	**.13**	**.02**	**1.00**
Avoidance of outgroups											
Configural	.56 (4)	—	—	.00	1.00	Configural	5.67 (4)	—	—	.04	1.00
Partial metric	**3.66 (6)**	**3.42 (2)**	**.18**	**.00**	**1.00**	Metric	5.88 (7)	.49 (3)	.92	.00	1.00
Metric	9.39 (7)	8.83 (3)	.03	.03	1.00	**Strong**	**12.89 (18)**	**7.60 (11)**	**.75**	**.00**	**1.00**
Strong/Strict	—	—	—	—	—	Strict	35.54 (22)	20.30 (4)	.00	.05	1.00
Minimization of race											
Configural	—	—	—	.00	1.00	Configural	—	—	—	.00	1.00
Metric	.94 (2)	.32 (2)	.85	.00	1.00	Metric	.23 (2)	.10 (2)	.95	.00	1.00
Strong	15.85 (10)	13.34 (8)	.10	.05	.99	Strong	3.99 (10)	3.83 (8)	.87	.00	1.00
Strict	**19.73 (13)**	**5.57 (3)**	**.13**	**.04**	**.99**	**Strict**	**6.21 (13)**	**2.16 (3)**	**.54**	**.00**	**1.00**
Promotion of equality											
Configural	—	—	—	.00	1.00	Configural	—	—	—	.00	1.00

	Gender (Male: 51%; Female: 49%)						Age (18–21: 42%; 22–25: 58%)				
Model	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**	**Model**	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**
Metric	1.01 (2)	.97 (2)	.62	.00	1.00	Metric	.19 (2)	.18 (2)	.91	.00	1.00
Strong	12.21 (10)	10.12 (8)	.26	.03	1.00	Strong	12.48 (10)	8.05 (8)	.43	.03	1.00
Strict	**15.80 (13)**	**4.73 (3)**	**.19**	**.03**	**1.00**	**Strict**	**15.15 (13)**	**5.78 (3)**	**.12**	**.02**	**1.00**
Cultural pluralism											
Configural	7.90 (4)	—	—	.06	1.00	Configural	9.51 (4)	—	—	.07	1.00
Metric	**13.39 (7)**	**4.57 (3)**	**.21**	**.06**	**1.00**	Metric	15.11 (7)	6.13 (3)	.11	.06	1.00
Strong	34.21 (18)	27.40 (11)	.00	.06	1.00	Strong	25.09 (18)	13.70 (11)	.25	.04	1.00
Strict	—	—	—	—	—	**Strict**	**29.08 (22)**	**5.51 (4)**	**.24**	**.03**	**1.00**
	Nativity (US-born: 79%; Foreign-born: 21%)						**Educational attainment (High School: 41%; Associate Degree+: 59%)**				
Model	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**	**Model**	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**
Maintenance of heritage culture											
Configural	148.66 (54)	—	—	.08	.97	Configural	138.35 (54)	—	—	.07	.97
Metric	142.11 (62)	9.20 (8)	.33	.07	.97	Metric	124.93 (62)	2.42 (8)	.97	.06	.98
Strong	**183.16 (87)**	**12.78 (25)**	**.98**	**.06**	**.97**	**Strong**	**147.83 (88)**	**29.12 (26)**	**.31**	**.05**	**.98**
Strict	198.18 (96)	34.12 (9)	.00	.06	.97	Strict	162.50 (97)	29.00 (9)	.00	.05	.98
Becoming American											
Configural	2.98 (4)	—	—	.00	1.00	Configural	3.81 (4)	—	—	.00	1.00
Metric	**3.35 (7)**	.42 (3)	.94	.00	1.00	**Metric**	**5.36 (7)**	**1.60 (3)**	**.66**	**.00**	**1.00**
Strong	19.14 (18)	**16.05 (11)**	**.14**	**.02**	**1.00**	Strong	40.96 (18)	20.14 (11)	.04	.07	1.00
Strict	34.35 (22)	10.71 (4)	.03	.04	1.00	Strict	—	—	—	—	—
Awareness of discrimination											
Configural	11.65 (4)	—	—	.08	1.00	Configural	4.69 (4)	—	—	.03	1.00
Metric	14.26 (7)	5.82 (3)	.12	.06	1.00	Metric	6.23 (7)	2.27 (3)	.52	.00	1.00
Strong	**23.86 (18)**	**10.58 (11)**	**.48**	**.03**	**1.00**	**Strong**	**16.03 (18)**	**12.80 (11)**	**.31**	**.00**	**1.00**
Strict	38.43 (22)	10.21 (4)	.04	.05	1.00	Strict	47.02 (22)	78.42 (4)	.00	.06	1.00
Avoidance of outgroups											
Configural	6.47 (4)	—	—	.05	1.00	Configural	6.36 (4)	—	—	.05	1.00
Metric	6.84 (7)	.59 (3)	.90	.00	1.00	Metric	7.11 (7)	.77 (3)	.86	.01	1.00
Strong	20.94 (17)	15.40 (10)	.12	.03	1.00	**Strong**	**21.60 (18)**	**13.29 (11)**	**.27**	**.03**	**1.00**

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	Gender (Male: 51%; Female: 49%)						Age (18–21: 42%; 22–25: 58%)				
Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	*p*	RMSEA	CFI	**Model**	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	*p*	RMSEA	CFI
Strict	**26.86 (21)**	**6.45 (4)**	**.17**	**.03**	**1.00**	Strict	41.96 (22)	34.09 (4)	.00	.06	1.00
Minimization of race											
Configural	—	—	—	.00	1.00	Configural	—	—	—	.00	1.00
Metric	3.17 (2)	3.69 (2)	.16	.05	1.00	Metric	.91 (2)	1.07 (2)	.59	.00	1.00
Strong	15.64 (10)	12.35 (8)	.14	.04	.99	Strong	10.56 (10)	6.87 (8)	.55	.01	1.00
Strict	**26.12 (13)**	**5.37 (3)**	**.15**	**.06**	**.99**	**Strict**	**12.62 (13)**	**3.53 (3)**	**.32**	**.00**	**1.00**
Promotion of equality											
Configural	—	—	—	.00	1.00	Configural	—	—	—	.00	1.00
Metric	.67 (2)	.66 (2)	.72	.00	1.00	Metric	.93 (2)	.98 (2)	.61	.00	1.00
Strong	7.56 (10)	**5.13 (8)**	**.74**	**.00**	**1.00**	**Strong**	**6.98 (10)**	**5.04 (8)**	**.75**	**.00**	**1.00**
Strict	**13.15 (13)**	9.10 (3)	.03	.01	1.00	Strict	12.35 (13)	16.30 (3)	.00	.00	1.00
Cultural pluralism											
Configural	5.15 (4)	—	—	.03	1.00	Configural	16.66 (4)	—	—	.11	1.00
Metric	5.18 (7)	.38 (3)	.94	.00	1.00	Metric	13.13 (7)	.63 (3)	.89	.06	1.00
Strong	19.76 (18)	14.47 (11)	.21	.02	1.00	**Strong**	**28.48 (18)**	**16.56 (11)**	**.12**	**.05**	**1.00**
Strict	**24.70 (22)**	**4.49 (4)**	**.34**	**.02**	**1.00**	Strict	45.33 (22)	24.75 (4)	.00	.06	1.00
	Asian-heritage region (East: 51%; South or South East: 49%)						**Region of residence (West: 47%; Other: 53%)**				
Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	*p*	RMSEA	CFI	**Model**	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	*p*	RMSEA	CFI
Maintenance of heritage culture											
Configural	137.40 (54)	—	—	.08	.97	Configural	137.04 (54)	—	—	.07	.97
Metric	**127.40 (62)**	**13.23 (8)**	**.10**	**.06**	**.98**	**Metric**	**132.38 (62)**	**2.91 (8)**	**.94**	**.06**	**.98**
Strong	200.34 (87)	46.51 (25)	.01	.07	.96	Strong	158.90 (87)	43.89 (25)	.01	.05	.98
Strict	—	—	—	—	—	Strict	—	—	—	—	—
Becoming American											
Configural	3.25 (4)	—	—	.00	1.00	Configural	9.42 (4)	—	—	.07	1.00
Metric	**9.58 (7)**	**5.03 (3)**	**.17**	**.04**	**1.00**	Metric	14.19 (7)	6.05 (3)	.11	.06	1.00
Strong	36.78 (18)	27.38 (11)	.00	.06	1.00	Strong	25.32 (18)	12.92 (11)	.30	.04	1.00
Strict	—	—	—	—	—	**Strict**	**29.41 (22)**	**4.50 (4)**	**.34**	**.03**	**1.00**
Awareness of discrimination											

	Gender (Male: 51%; Female: 49%)						Age (18–21: 42%; 22–25: 58%)				
Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	***p***	**RMSEA**	**CFI**	**Model**	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	***p***	**RMSEA**	**CFI**
Configural	8.40 (4)	—	—	.06	1.00	Configural	4.98 (4)	—	—	.03	1.00
Metric	10.34 (7)	3.01 (3)	.39	.04	1.00	**Metric**	**4.59 (7)**	**.13 (3)**	**.99**	**.00**	**1.00**
Strong	**22.24 (18)**	**9.12 (11)**	**.61**	**.03**	**1.00**	Strong	31.81 (18)	26.91 (11)	.00	.05	1.00
Strict	54.79 (22)	20.57 (4)	.00	.07	1.00	Strict	—	—	—	—	—
Avoidance of outgroups											
Configural	1.66 (4)	—	—	.00	1.00	Configural	8.54 (4)	—	—	.06	1.00
Metric	8.71 (7)	1.22 (3)	.75	.03	1.00	Metric	8.55 (7)	.39 (3)	.94	.03	1.00
Strong	**22.08 (18)**	**19.29 (11)**	**.06**	**.03**	**1.00**	Strong	13.13 (18)	8.61 (11)	.66	.00	1.00
Strict	24.99 (22)	10.39 (4)	.03	.02	1.00	**Strict**	**15.23 (22)**	**2.02 (4)**	**.73**	**.00**	**1.00**
Minimization of race											
Configural	—	—	—	.00	1.00	Configural	—	—	—	.00	1.00
Metric	1.82 (2)	.68 (2)	.71	.00	1.00	Metric	.13 (2)	.05 (2)	.98	.00	1.00
Strong	9.25 (10)	2.61 (8)	.96	.00	1.00	Strong	8.36 (10)	8.42 (8)	.39	.00	1.00
Strict	**19.41 (13)**	**4.17 (3)**	**.24**	**.04**	**.99**	**Strict**	**10.35 (13)**	**1.55 (3)**	**.67**	**.00**	**1.00**
Promotion of equality											
Configural	—	—	—	.00	1.00	Configural	—	—	—	.00	1.00
Metric	3.79 (2)	.07 (2)	.96	.06	1.00	Metric	3.24 (2)	2.80 (2)	.25	.05	1.00
Strong	14.51 (10)	10.35 (8)	.24	.04	1.00	**Strong**	**9.41 (10)**	**7.45 (8)**	**.49**	**.00**	**1.00**
Strict	**21.31 (13)**	**4.90 (3)**	**.18**	**.05**	**1.00**	Strict	23.41 (13)	10.62 (3)	.01	.05	1.00
Cultural pluralism											
Configural	8.91 (4)	—	—	.07	1.00	Configural	10.21 (4)	—	—	.07	1.00
Metric	8.22 (7)	1.08 (3)	.78	.03	1.00	Metric	13.61 (7)	3.84 (3)	.28	.06	1.00
Strong	**15.73 (18)**	**10.09 (11)**	**.52**	**.00**	**1.00**	**Strong**	**29.07 (18)**	**16.34 (11)**	**.13**	**.05**	**1.00**
Strict	44.85 (22)	31.38 (4)	.00	.06	1.00	Strict	50.44 (22)	13.83 (4)	.01	.07	1.00

	Parental education (High School: 28%; Associate Degree+: 72%)				
Model	$\chi^2(df)$	$\Delta\chi^2(\Delta df)$	***p***	**RMSEA**	**CFI**
Maintenance of heritage culture					
Configural	145.47 (54)	—	—	.08	.97
Metric	**136.22 (62)**	**6.24 (8)**	**.62**	**.07**	**.98**

	Gender (Male: 51%; Female: 49%)						Age (18–21: 42%; 22–25: 58%)				
Model	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**	**Model**	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**
Strong	219.09 (87)	82.99 (25)	.00	.07	.96						
Strict	—	—	—	—	—						
Becoming American											
Configural	6.13 (4)	—	—	.04	1.00						
Partial metric	**13.81 (6)**	**4.84 (2)**	**.09**	**.07**	**1.00**						
Metric	24.38 (7)	10.06 (3)	.02	.09	1.00						
Strong/Strict	—	—	—	—	—						
Awareness of discrimination											
Configural	.81 (4)	—	—	.00	1.00						
Metric	**7.12 (7)**	**5.90 (3)**	**.12**	**.01**	**1.00**						
Strong	33.13 (18)	28.23 (11)	.00	.05	1.00						
Strict	—	—	—	—	—						
Avoidance of outgroups											
Configural	3.39 (4)	—	—	.00	1.00						
Metric	7.77 (7)	1.73 (3)	.63	.02	1.00						
Strong	30.31 (18)	16.81 (11)	.11	.05	1.00						
Strict	**38.59 (22)**	**8.78 (4)**	**.07**	**.05**	**1.00**						
Minimization of race											
Configural	—	—	—	.00	1.00						
Metric	**.25 (2)**	**.06 (2)**	**.97**	**.00**	**1.00**						
Strong	18.30 (10)	18.55 (8)	.02	.05	.99						
Strict	—	—	—	—	—						
Promotion of equality											
Configural	—	—	—	.00	1.00						
Metric	.86 (2)	.79 (2)	.68	.00	1.00						
Strong	**2.92 (10)**	**1.28 (8)**	**1.00**	**.00**	**1.00**						
Strict	9.39 (13)	9.51 (3)	.02	.00	1.00						
Cultural pluralism											
Configural	6.01 (4)	—	—	.04	1.00						
Metric	6.51 (7)	1.35 (3)	.72	.00	1.00						

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	Gender (Male: 51%; Female: 49%)						Age (18–21: 42%; 22–25: 58%)				
Model	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**	**Model**	**$\chi^2(df)$**	**$\Delta\chi^2(\Delta df)$**	***p***	**RMSEA**	**CFI**
Strong	**21.05 (18)**	**10.80 (11)**	**.46**	**.02**	**1.00**						
Strict	35.98 (22)	37.61 (4)	.00	.05	1.00						

Note. Metric: previous configural invariance model + factor loadings invariant; Partial metric: previous configural invariance model + some factor loadings invariant; Strong: previous metric invariance model + thresholds invariant; Strict: previous strong invariance model + unique variances invariant. Final levels of invariance reached are highlighted in bold type. The percentages of East Asian versus Southeast Asian/South Asian groups are slightly different from the percentages reported in the participant section as we did not include the 21 participants who did not report a specific Asian background.

Table 5

Descriptive Statistics and Zero-Order Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Maintenance of heritage culture	—										
2. Becoming American	−.19**	—									
3. Awareness of discrimination	.39**	−.03	—								
4. Avoidance of outgroups	.21**	−.24**	.33**	—							
5. Minimization of race	.17**	.03	.31**	.22**	—						
6. Promotion of equality	.01	.53**	.09*	−.34**	.16**	—					
7. Cultural pluralism	.10*	.57**	.28**	−.13**	.21**	.69**	—				
8. MEIM-6	.40**	.13**	.25**	.02	.10*	.20**	.27**	—			
9. Ethnic identity centrality	.33**	−.01	.13**	.03	.03	.07	.12**	.59**	—		
10. Pluralistic orientation	.24**	.20**	.03	−.15**	−.03	.28**	.24**	.15**	−.03	—	
11. Perceived peer discrimination	.23**	.04	.46**	.29**	.23**	.06	.22**	.15**	.01	−.01	—
α	.84	.89	.90	.90	.71	.85	.89	.90	.85	.77	.96
M	3.63	3.30	2.53	1.93	1.99	3.48	3.04	3.59	4.12	4.18	2.08
SD	.81	1.15	1.1	.97	.87	1.06	1.09	.82	1.16	.58	.91

Note. α = Cronbach's α.

*$p < .05$.

**$p < .01$.