

## Discrepancies in East Asians' perceived actual and ideal phenotypic facial features

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Keywords: East Asian, racial phenotypicality; stigma; face morphing; racial minority

Acknowledgements:

De-identified data for the study are posted at:

<https://osf.io/ph27z/>

### Abstract

The present study tested for the existence of a phenotypic actual-ideal discrepancy in East Asians' appraisals of their own faces, in the direction of idealizing a phenotypically "Whiter" face than they perceived themselves to have. The study was conducted in two phases. In the first phase, East Asian participants residing in the U.S. ( $N = 104$ ;  $M_{age} = 18.73$ ) came into the lab to have their photograph taken. They were sent a link to complete the second phase online. Participants were required to recall either their previous day, an experience of racial discrimination, or an experience of racial acceptance. They then selected their actual and ideal face from an array of faces comprising their actual face and eight variants of their face that had been transformed to look phenotypically more "White" or more "East Asian". A robust actual-ideal discrepancy emerged: participants both idealized a phenotypically "Whiter" face and perceived themselves as having a more phenotypically "East Asian" face than they objectively did. This discrepancy arose irrespective of whether participants were reminded of an incident of racial discrimination or acceptance.

Keywords: East Asian, racial phenotypicality; stigma; face morphing; racial minority

### Public significance statement

The present research uncovers an actual-ideal discrepancy in the way East Asian Americans perceive themselves, such that they idealize a phenotypically "Whiter" face and perceive themselves as having a more phenotypically "East Asian" face than they actually do. These findings highlight the need for strategies to counteract the pervasive "White ideal" and foster more positive self-perceptions in East Asians and other racial minority group members who may also be susceptible.

### Discrepancies in East Asians' perceived actual and ideal phenotypic facial features

Prominent Chinese American public figure, Julie Chen, made headlines when she revealed that she had undergone cosmetic surgery to enlarge her eyes early in her career after her boss expressed to her that her "Asian eyes" were preventing her from progressing in her profession as a news reporter (He, 2013). This phenotype-based stigma, and the discrimination that results from it, is pervasive and experienced by many people of East Asian descent in the U.S.<sup>1</sup> (Kaw, 1993; Lee & Thai, 2015; Nadal, 2008). However, little research has assessed how East Asians perceive themselves on a phenotypic level, what their phenotypic ideals are, and most importantly, whether a discrepancy between their actual and ideal self-perceptions exists. The present research extends the literature by investigating whether East Asians experience a phenotypic actual-ideal discrepancy, such that they idealize a phenotypically "Whiter" face than that which they perceive themselves to have.

### **Phenotype-based stigma**

The proposition that East Asians may idealize a "Whiter" face (e.g., wider eyes, thinner nose) is best understood against the backdrop of the broader literature on racial phenotypicity bias and its consequences. Racial phenotypes refer to the distinct physical characteristics and attributes (e.g., skin color, facial features) that separate racial groups (Maddox, 2004). The literature on racial phenotypicity bias has predominantly focused on the Black American experience, showing that Black Americans who possess features phenotypic of their own racial group are often evaluated and treated more negatively than those who possess "Whiter" phenotypic features (Blair, Judd, & Chapleau, 2004; Blair, Judd, Fallman, 2004; Blair, Judd, Sadler, & Jenkins, 2002; Dixon & Maddox, 2004; Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Hagiwara, Kashy, & Cesario, 2012; Hebl, Williams, Sundermann, Kell, & Davies, 2012; Livingston & Brewer, 2002; Maddox, 2004; Maddox & Gray, 2002).

There is evidence that Black Americans are aware of the stigma associated with their phenotypic features and internalize the “White ideal” accordingly. Seminal work showed, at a time when color-based stigma was deeply entrenched, that Black American children preferred White over Black dolls (Clark & Clark, 1947). Research conducted since has demonstrated that Black Americans still exhibit a preference for lighter complexions and less phenotypical features (Averhart & Bigler, 1997; Bond & Cash, 1992; Hall, 1992; Maddox & Gray, 2002; Robinson-Moore, 2008). Bond and Cash (1992), for example, had Black American women identify their actual and preferred skin color from a color wheel ranging from very light to very dark. Their findings demonstrated that some Black American women exhibited a phenotypic actual-ideal discrepancy, idealizing lighter skin than what they perceived themselves to have.

Although the work described above has focused specifically on the Black American experience, there is evidence that racial phenotypicality bias also affects other racial minority groups (Uhlmann, Dasgupta, Elgueta, Greenwald, & Swanson, 2002). Most relevant to the present investigation into East Asian phenotypicality, research shows that Asian faces higher in phenotypicality are more likely to be judged according to stereotypes (Wilkins, Chan & Kaiser, 2011). In turn, Asian Americans with darker skin report experiencing more racial micro-aggressions and other subtle forms of racial discrimination (Bozo, Revels-Macalinao, & Huynh, 2018; Lee & Thai, 2015). Given these links between racial phenotypicality and negative treatment for people of East Asian descent, it is possible that they may also display a phenotypic actual-ideal discrepancy.

### **Evidence for an actual-ideal discrepancy in East Asians**

To date, the topic of phenotypic self-perceptions in East Asians has received relatively little empirical attention. Using a doll paradigm adapted from Clark and Clark (1947), Fox and Jordan (1973) found that Chinese American children demonstrated

significantly lower own-race preference and identification than both White and Black American children. No research has explicitly investigated whether a phenotypic actual-ideal discrepancy exists in East Asians, however, the broader literature on East Asians' appearance-related concerns converge to suggest that it may.

Research consistently demonstrates that East Asian men and women perceive themselves less favorably in terms of body image and self-perceived attractiveness than White men and women (Arkoff & Weaver, 1966; Sue & Morishima, 1982; White & Chan, 1983). East Asian women have specifically reported lower satisfaction with their eye shape and face compared to White women (Frederick, Kelly, Latner, Sandhu, & Tsong, 2016). Furthermore, East Asian women are more likely to endorse mainstream, "White" beauty standards (Brady et al., 2017) and consequently experience greater dissatisfaction with their bodies than Black women (Chin Evans & McConnell, 2010). These appearance concerns also manifest in behavior; East Asians are the racial minority group most likely to undergo cosmetic surgery (Chen, 1994). We argue that this may be evidence of an underlying phenotypic actual-ideal discrepancy, such that East Asians may idealize "Whiter" features than they have.

According to self-discrepancy theory (Higgins, 1987), individuals have multiple domains of the self, including their actual self, comprising the attributes and qualities they perceive they possess, as well as their ideal self, comprising the attributes and qualities they would like to possess. The ideal self can be influenced by societal definitions of beauty, passed on through channels such as the media and social media (Ahadzadeh, Sharif, & Ong, 2017; Bessenoff, 2006; Dittmar, Halliwell, & Stirling, 2009; Vartanian, 2012). People who perceive a discrepancy between their actual and ideal self may experience distorted self-perceptions and psychological distress as a result (Higgins, 1987; Vartanian, 2012).

Researchers have strongly suggested that the phenotypic “White ideal” permeates across cultures and is internalized by people of Asian descent across the world (Aquino & Steinkamp, 2016; Bissell & Chung, 2009; David & Nadal, 2013; David & Okazaki, 2006; Hall, 1995; Jung & Lee, 2006; Mok, 1998a; Mok, 1998b; Murray & Price, 2011). In addition, those residing in Western nations such as the U.S. are further socialized to understand that the adoption of White norms and ideals is tantamount to being accepted and bolstering one’s social position (Bonilla-Silva, 2013; Kim, 1999; Thai, Barlow, & Hornsey, 2014; Thai, Szeszeran, Hornsey, & Barlow, 2020; Zhou, 2004; Zhou & Xiong, 2005). Given the pervasive idealization of White phenotypicality that has previously been found to affect the phenotypic self-perceptions of Black Americans (Bond & Cash, 1992), it is important to investigate whether East Asians experience a phenotypic actual-ideal discrepancy such that they idealize “Whiter” features. The main goal of the present study is to test for the existence of such a discrepancy.

Doing so requires modification of the methodology that has been traditionally used to measure phenotypic self-perceptions. Past research investigating phenotypic self-perceptions has predominantly focused on Black Americans and, consequently, has mostly employed techniques to measure actual-ideal discrepancies in skin color (e.g., the color wheel; Bond & Cash, 1992). Racial phenotypes, however, comprise an array of features other than skin color (e.g., eye shape, nose shape). Thus, an investigation of phenotypic self-perceptions in East Asians requires a more sophisticated methodology capable of manipulating a richer array of phenotypic features, holistically. The present study therefore employs face morphing technology to investigate the existence of a phenotypic actual-ideal discrepancy in East Asians.

### **Shifting the actual-ideal discrepancy**

A secondary, exploratory goal of this paper is to explore whether the magnitude of any discrepancy found can be qualified by the salience of racial discrimination. Past work shows that actual-ideal discrepancies are malleable and can change as a result of experimental manipulations (Dittmar et al., 2009). Given that racial discrimination makes phenotype-based stigma salient (Maddox, 2004), it is possible that reminders of racial discrimination may enhance any phenotypic actual-ideal discrepancies that might emerge for East Asians. Supporting this notion, perceived racial discrimination has been associated with Asians peoples' body dissatisfaction (Cheng, 2014; Iyer & Haslam, 2003; Reddy & Crowther, 2007), along with greater intentions in East Asians to undergo cosmetic procedures to remove phenotypic racial markers (Kaw, 1993). In turn, we propose that reminders of the direct antithesis of racial discrimination – racial acceptance – may ameliorate such actual-ideal discrepancies in East Asians. Acceptance signifies that one is socially valued (Anthony, Holmes, & Wood, 2007), and may therefore increase satisfaction with the self and mitigate adherence to discrepant ideals. As there is no previous evidence to suggest that reminders of racial discrimination or racial acceptance can qualify actual-ideal discrepancies, this is an exploratory research question.

### **The present research**

The present study investigated the existence of a phenotypic actual-ideal discrepancy in an East Asian sample residing in the U.S. Face morphing technology was used to subtly manipulate the phenotypic features of participants. Participants were presented with an array of faces comprising their objective actual face along with variants of their face that had been morphed to look phenotypically more “White” and more “East Asian.” From this array, they were asked to select their ideal face. We also measured *perceived* actual face. Comparing the perceived actual face with *objective* actual face allowed us to assess the accuracy of participants' phenotypic self-perceptions. More importantly for the current paper, comparing

the perceived actual face with the ideal face allowed us to assess whether there is an actual-ideal discrepancy in phenotypic features.

Based on past research into racial minority actual-ideal discrepancies (Bond & Cash, 1992) and the phenotypic self-perceptions of East Asians (Arkoff & Weaver, 1966; Brady et al., 2017; Chin Evans & McConnell, 2010; Frederick et al., 2016; Hall, 1995; Sue & Morishima, 1982; White & Chan, 1983), we hypothesized an actual-ideal discrepancy in East Asian participants, such that they would select an ideal face that is phenotypically “Whiter” than the face they select as their perceived actual face. As a secondary, exploratory research question, we also investigated how durable any observed actual-ideal discrepancy was; that is, whether it could shift as a function of fleeting reminders of racial discrimination or racial acceptance. We made the exploratory prediction that reminders of racial discrimination might increase the magnitude of the actual-ideal discrepancy, while reminders of racial acceptance might decrease it.

## Method

### Participants

Participants were recruited from a large U.S. university. We aimed to test all East Asian students who were available to us for the semester in which data were collected. One hundred and nine East Asian undergraduate students signed up to the study. Data from one mixed race participant (White/East Asian) and two South Asian participants were removed as the present study focused on East Asian phenotypic features. Data from two other participants who did not complete all phases of the study were also removed. The final sample comprised 104 East Asian students<sup>2</sup> (55 female, 47 male, 2 other;  $M_{age} = 18.73$ ,  $SD = 1.12$ ) who participated for course credit. All measures, manipulations, and exclusions are disclosed, and data were analyzed after all participants were collected. A sensitivity power analysis using G\*Power (Faul, Erfelder, Lang, & Buchner, 2007) determined that the study

had 80% power to detect an effect as small as  $d = .27$  for the within-subjects test of an actual-ideal discrepancy in face perception.

### **Materials and Procedure**

The present study had human subject approval from [masked]. The study was conducted in two phases. In the first phase, participants came into the laboratory to provide informed consent, have their photograph taken, and to complete an unrelated task intended to conceal the purpose of the study. Photographs were taken under standard conditions with participants adopting a neutral facial expression. Participants did not see the photograph that was taken of them.

Between phases 1 and 2, the facial photographs of participants were manipulated to possess either more phenotypically “East Asian” or phenotypically “White” features. Photographs were manipulated in the *Webmorph* online software package (DeBruine & Tiddeman, 2016). To manipulate each participant’s facial photograph, we used a technique standard to objectively manipulating facial photographs on other facial traits, such as facial masculinity/femininity (for further information, see Benson & Perrett, 1993; Perrett et al., 1998).

We first created composite “White” and “East Asian” faces based on an independent sample of 50 individuals for each racial category. These faces represented the prototypical face (in terms of shape and color) for each race<sup>3</sup>. The linear shape and color differences between the prototypical “East Asian” and “White” faces were then computed based on 129 facial landmarks previously used in face morphology research and chosen to capture the wide extent of face-shape variation. These differences represent the East Asian-White racial dimension, where individuals on one end possess more phenotypically “East Asian” facial features while individuals at the other end possess more phenotypically “White” facial features. The same 129 landmarks were also identified on each participant’s facial

photograph. To manipulate each image, the differences between the prototypical “East Asian” and “White” faces were applied to each participant’s facial photograph at varying intervals (ranging from -100% to +100% at 25% intervals resulting in 8 images excluding the original). To avoid confounds and ensure that facial symmetry (which has previously been linked to attractiveness; see Perrett et al., 1999) did not systematically vary with the transformations, each image was made symmetrical and masked to only contain facial information (i.e., contextual cues such as hair were removed). This process effectively manipulated each participant’s face along the East Asian-White facial dimension while retaining the identity of the participant, resulting in 8 manipulated facial photographs (9 images in total including the original; refer to Figure 1 for an example)<sup>4</sup>.

The second phase of the study was completed online, and took place approximately two weeks after the first phase. After logging in to the online experiment using their unique identifiers, participants were randomly assigned to one of three conditions of a between-groups design. Depending on the condition, they were asked to recall and write about either a past incident of (1) racial acceptance, or (2) racial discrimination, or (3) to write about their previous day. There was no time limit for this task and participants were not able to skip to the next page without responding (see Supplementary Materials for specific writing prompts given to participants and associated checks). After responding, participants were presented with a 3 x 3 matrix comprising versions of their faces, as described above; see Figure 1. Faces were presented in a randomized order. Participants were not informed that their faces had been manipulated on a racially phenotypic basis.

**Actual/ideal face selection.** From the nine faces presented to them, participants were asked: “Which of the following faces do you believe represents your *actual* face?” They were then asked: “Which of the following faces would be your *ideal* face?” Responses were coded on a 9-point scale (-4 to +4, with a mid-point of zero) such that higher/positive scores

indicated the selection of a more phenotypically “White” face, and lower/negative scores indicated the selection of a more phenotypically “East Asian” face. A score of zero indicated the selection of their (objective) actual face.

### Results

Means and standard deviations for actual and ideal face scores can be seen in Table 1. A mixed ANOVA with actual and ideal face scores as the within-participants variable and condition as the between-participants variable revealed a significant overall actual-ideal discrepancy,  $F(1, 101) = 15.84, p < .001, \eta_p^2 = .14, d = 0.79$ . Overall, participants’ perceived their actual face ( $M = -0.58, SD = 1.93$ ) to be more phenotypically “East Asian” than their ideal face ( $M = 0.45, SD = 2.10$ ); see Figure 2. This actual-ideal discrepancy was robust, as indicated by the absence of an interaction by experimental condition,  $F(2, 101) = 0.55, p = .577, \eta_p^2 = .01$ . No main effect of experimental condition emerged either,  $F(2, 101) = 0.38, p = .682, \eta_p^2 = .01$ .

We then conducted one-sample t-tests to assess the discrepancy between participants’ actual and ideal face selections with their objective actual face. Overall, participants idealized a phenotypically “Whiter” face than they objectively had,  $t(103) = 2.19, p = .031, d = 0.21, 95\% \text{ CI } [0.02, 0.41]$ , and perceived their faces as more phenotypically “East Asian” than they objectively were,  $t(105) = -3.04, p = .003, d = -0.30, 95\% \text{ CI } [-0.49, -0.10]$ .

Although it was not pertinent to the present research question, we also explored whether there was a difference between male and female participants in their phenotypic actual-ideal discrepancies. A supplementary analysis including gender as a variable revealed no main effect of gender,  $F(1, 100) = 0.12, p = .727, \eta_p^2 < .01$ , nor interaction by gender,  $F(1, 100) = 0.49, p = .485, \eta_p^2 = .01$ .

### Discussion

Racial minority group members often experience stigma as a result of their racial phenotypicity; the further their phenotypes deviate from the “White ideal”, the more discrimination they have been shown to face (Maddox, 2004). Given the pervasiveness of such phenotype-based stigma, researchers have suggested that it may be internalized by racial minority group members, such that they idealize “Whiter” phenotypic features (Aquino & Steinkamp, 2016; Averhart & Bigler, 1997; Bissell & Chung, 2009; Bond & Cash, 1992; Hall, 1992; Hall, 1995; Jung & Lee, 2006; Maddox & Gray, 2002; Mok, 1998a; Mok, 1998b; Murray & Price, 2011; Robinson-Moore, 2008; Uhlmann et al., 2002). To date, however, no research has empirically investigated whether East Asians have a phenotypic actual-ideal discrepancy in the direction of desiring “Whiter” features. The present research aimed to fill this gap using face morphing methodology.

A robust phenotypic actual-ideal discrepancy emerged: East Asian participants saw themselves as more phenotypically “East Asian” than they were, and desired to look phenotypically “Whiter” than they were. This builds upon the previous work on skin color actual-ideal discrepancies in Black Americans (Bond & Cash, 1992) by showing that Asians too exhibit a phenotypic actual-ideal discrepancy in the direction of desiring “Whiter” facial features than what they perceive themselves to have. This discrepancy consistently emerged for participants whether they recounted their previous day, an experience of racial discrimination, or an experience of racial acceptance, though these were relatively low-powered tests (e.g., comparisons between conditions had only an average of 53% power for detecting a medium between-subjects effect of  $d = .50$ ). Given the consistent actual-ideal discrepancy observed, these results suggest that the discrepancy is unlikely to be strongly influenced by singular, spontaneous reminders of discrimination or acceptance.

The idealization of a phenotypically “Whiter” face in the present East Asian sample suggests that phenotype-based stigma and the associated “White ideal” manifests in the ideals

of East Asians. This supports past researchers' assertions that processes such as the globalization of White norms and ideals, along with the subsequent development of colonial mentality in people of Asian descent, has altered perceptions regarding what constitutes beauty (Aquino & Steinkamp, 2016; Bissell & Chung, 2009; David & Nadal, 2013; David & Okazaki, 2006; Hall, 1995; Jung & Lee, 2006; Mok, 1998a; Mok, 1998b; Murray & Price, 2011). This finding may even reflect a deeper issue ingrained in the experience of being a person of Asian descent residing in societies such as the U.S. Scholars have specified that Asian Americans have internalized the norm that avoiding racial mistreatment or attaining a higher social position in the U.S. entails the adoption of White norms for appearance and behavior (Bonilla-Silva, 2013; Kim, 1999; Zhou, 2004; Zhou & Xiong, 2005). The internalization of a phenotypic "White ideal" may be an extension of this motive.

Unexpectedly, the actual-ideal discrepancy manifested not only from an idealization of a phenotypically "Whiter" face, but also from a concurrent perceptual exaggeration in their own "East Asian" phenotypicality. To our knowledge, this is the first study to demonstrate evidence of perceptual distortion in the phenotypic self-perceptions of East Asians, or of any racial minority group. Although the reason for this distortion is unclear, work in the field of body image shows that people who are chronically exposed to idealized depictions of beauty through channels such as the media report distorted perceptions of their own bodies (Myers & Biocca, 1992; Shaw & Waller, 1995). Thus, it is possible that a similar phenomenon plays out in the domain of racial phenotypicality, such that the chronic stigma associated with racial minority phenotypicality distorts racial minority group members' self-perceptions, making their stigmatized racial features more salient. Future research should further explore this phenomenon to determine its underlying causes.

Taken together with past research on East Asians' appearance-related concerns (Arkoff & Weaver, 1966; Brady et al., 2017; Chin Evans & McConnell, 2010; Frederick et

al., 2016; Sue & Morishima, 1982; White & Chan, 1983), the present findings illustrate that phenotypic self-perceptions represent a real issue for East Asians. Practically, the finding that East Asians experience a phenotypic actual-ideal discrepancy in their facial self-perceptions may contribute to our understanding about the use of face-altering applications and “beauty” filters among young East Asian people to change their facial features in photographs and on social media (Nguyen, 2017). The use of such applications is most prominent in East Asian countries such as China, Japan, and Korea, and is typically used to reduce features associated with the East Asian phenotype (e.g., lighten skin, enlarge eyes; Varagur, 2016).

The present findings highlight the importance of devoting efforts to improve the phenotypic self-perceptions of people of East Asian descent. For example, the recognition of the impact of phenotype-based stigma on Black Americans has historically spurred large social and political movements aimed at improving racial pride and promoting positive phenotypic self-perceptions in Black Americans (e.g., the *Black is Beautiful* movement). Such a movement may also prove beneficial for people of East Asian descent. Scholars have also highlighted the globalization of the “White ideal” through Western mass media as a key determinant of the ongoing internalization of phenotype-based stigma in many racial minority group members (Brady et al., 2017; Jung & Lee, 2006; Murray & Price, 2011). Thus, increasing the prominence of alternative beauty ideals in mainstream media to counteract the overwhelming “White ideal” may be a potent way to foster more positive phenotypic self-perceptions in East Asians and other racial minority groups.

### **Limitations and Future Directions**

The present results should be interpreted in light of the limitations of the study. For example, the finding that the actual-ideal discrepancy was not influenced by spontaneous reminders of racial discrimination or racial acceptance may reflect the weak nature of these

experimental manipulations. Given there were no minimum requirements for the writing task deployed in the study, participants wrote only brief, superficial accounts of a past incident of racial discrimination or racial acceptance. In addition, the experimental manipulations may not have influenced phenotypic self-perceptions as they primed participants to think about category-based treatment (i.e., discrimination or acceptance on the basis of one's race) rather than phenotype-based treatment (i.e., discrimination or acceptance on the basis of one's racial phenotypic features). It is possible that longer, more elaborate recountings of past instances of phenotype-based discrimination or acceptance would elicit changes in phenotypic actual-ideal discrepancies. Future work should explore this possibility with a stronger and more focused experimental manipulation.

Although the present work established an actual-ideal discrepancy in East Asians, it did not assess the psychological outcomes that could emerge as a result of experiencing these actual-ideal discrepancies. Self-discrepancy theory proposes that experiencing discrepancies between the perceived actual and ideal self can give rise to negative psychological costs (Higgins, 1987). These negative implications have been established in the broader context of body image, where greater perceived actual-ideal discrepancies are associated with appearance dissatisfaction and psychological disturbance (Bessenoff & Snow, 2006; Vartanian, 2012; Veale, Kinderman, Riley, & Lambrou, 2003). Future work should therefore explore whether similar outcomes are produced for East Asian people who experience an actual-ideal discrepancy in their phenotypic self-perceptions. Behavioural intentions of experiencing a phenotypic actual-ideal discrepancy could also be assessed, to test the long implied link between negative phenotypic self-perceptions and intentions to undergo cosmetic procedures to alter phenotypic features (Kaw, 1993; Chen, 1994).

The present sample comprised both East Asian Americans and East Asians residing in the U.S. Past work has also collapsed these two groups together, arguing that the experiences

of these groups in the U.S. cultural context are similar (e.g., Cheng, 2014; Chin Evans & McConnell, 2010; Hall, 1995; Frederick et al., 2016). Nevertheless, it would be important for future research in this area to collect larger samples of East Asian Americans and East Asians, to more accurately ascertain the the actual-ideal discrepancy for each of these groups separately. Given that Asian people raised in the U.S. may be further socialized to prefer to look and act more “White” to escape the racism implicated in a White hegemonic system (Bonilla-Silva, 2013; Kim, 1999; Zhou, 2004; Zhou & Xiong, 2005), it is possible that they may exhibit a stronger phenotypic actual-ideal discrepancy.

Given the entire sample attended a majority-White American university, it would be beneficial to examine differences in the magnitude of the actual-ideal discrepancy between East Asian people residing in the U.S. and those residing in East Asia, to rule out the possibility that participants were conforming to a situational White norm. There would be no theoretical reason to suspect drastic differences, however; scholars have suggested that the “White ideal” is prevalent and internalized by people of East Asian descent globally (Cheng, 2014; David & Nadal, 2013; David & Okazaki, 2006; Hall, 1995; Jung & Lee, 2006; Murray & Price, 2011).

Relatedly, although the present study focused exclusively on people of East Asian descent, it is important to acknowledge that Asian diasporas also comprise other subgroups that are similarly underrepresented in the literature on racial phenotypicality. For example, people of South Asian descent possess a set of prototypical phenotypic features distinct from that of East Asians (Walker & Hewstone, 2006). There is some evidence that South Asian people may also experience phenotypic actual-ideal discrepancies in their self-perceptions. Sahay and Piran (1997) found that South Asian Canadian women reported a greater desire for lighter skin, the further they deviated from the cultural “White ideal.” More recently, Harper and Choma (2019) found that greater internalization of the “White ideal” predicted greater

skin tone and hair dissatisfaction, as well as skin bleaching behavior in Indian women.

Future research should continue to explore the phenotypic self-perceptions of a variety of Asian subgroups to determine whether phenotypic self-perceptions vary among them.

It is also important to acknowledge that the superordinate East Asian racial group is a heterogeneous group, and comprises members of many ethnicities (e.g., Chinese, Taiwanese, Japanese, Korean). Although there is some phenotypic overlap across these ethnic groups as a result of belonging to the same racial group, there may be slight variations in the prototypical phenotypes across different ethnic groups. The relatively small sample and the lack of demographic information pertaining to ethnic heritage in the present study precluded more nuanced examinations of differences in actual-ideal discrepancies between East Asian ethnic groups. It should be noted that ethnic variations in phenotypes have also been largely overlooked in the broader literature, which has predominantly focused on phenotypic differences at the racial level (Maddox, 2004). Thus, it may prove fruitful for future research to examine differences in self-perceptions at an ethnic level.

### **Conclusions**

There is a dearth of research on racial phenotypicality biases in people of East Asian descent. The present study is the first to document the existence of a phenotypic actual-ideal discrepancy in the self-perceptions of an East Asian American and East Asian sample using a face morphing paradigm. Participants idealized a phenotypically “Whiter” face than what they perceived themselves to have, which was a phenotypically more “East Asian” face than what they objectively had. We close with a call for further research to probe both the psychological causes and consequences of this actual-ideal discrepancy for people of East Asian descent.

## Footnotes

1. In the present study, *East Asian* refers to people of East Asian descent (e.g., Chinese, Taiwanese, Japanese, Korean). The sample in the present study comprises East Asian participants attending a U.S. university at the time of testing.
2. The sample included both East Asian Americans and East Asians residing in the U.S. We collapsed over these participants to bolster the sample size. Past work has also done the same, given their racialized experiences of living in the U.S. are argued to be similar (e.g., Brown et al., 2009; Cheng, 2014; Chin Evans & McConnell, 2010; Hall, 1995; Frederick et al., 2016).
3. Fifty images per composite is greater than the number typically used for this method of facial manipulation. For comparison, Boothroyd et al. (2005) used 15 and 19 faces per composite to manipulate age, Penton-Voak et al. (1999) used 39 images per composite to manipulate facial masculinity/femininity, Little (2012) used 8 faces per composite to manipulate baby-face schema), and previous research has found that composite images do not appear significantly more prototypical after around six faces (Little & Hancock, 2002).
4. In a follow-up study, an independent group of participants ( $N = 30$ ) completed a task in which they selected the face they perceived to be more “Asian” from all possible pairings of the faces from Figure 1. Results demonstrated that the linear, gradual variation from East Asian to White features was correctly recognized by this independent sample. The proportion of the trials in which each face was selected as being the more “Asian” face, where 1 represents the most “East Asian” face and 9 represents the least “East Asian” face, were as follows: 1 = 79%, 2 = 74%, 3 = 66%, 4 = 65%, 5 = 55%, 6 = 44%, 7 = 34%, 8 = 22%, 9 = 13%. An accuracy analysis

revealed that faces were correctly chosen as the more “Asian” face in the pairing 80% of the time, and no single face had lower than 73% accuracy.

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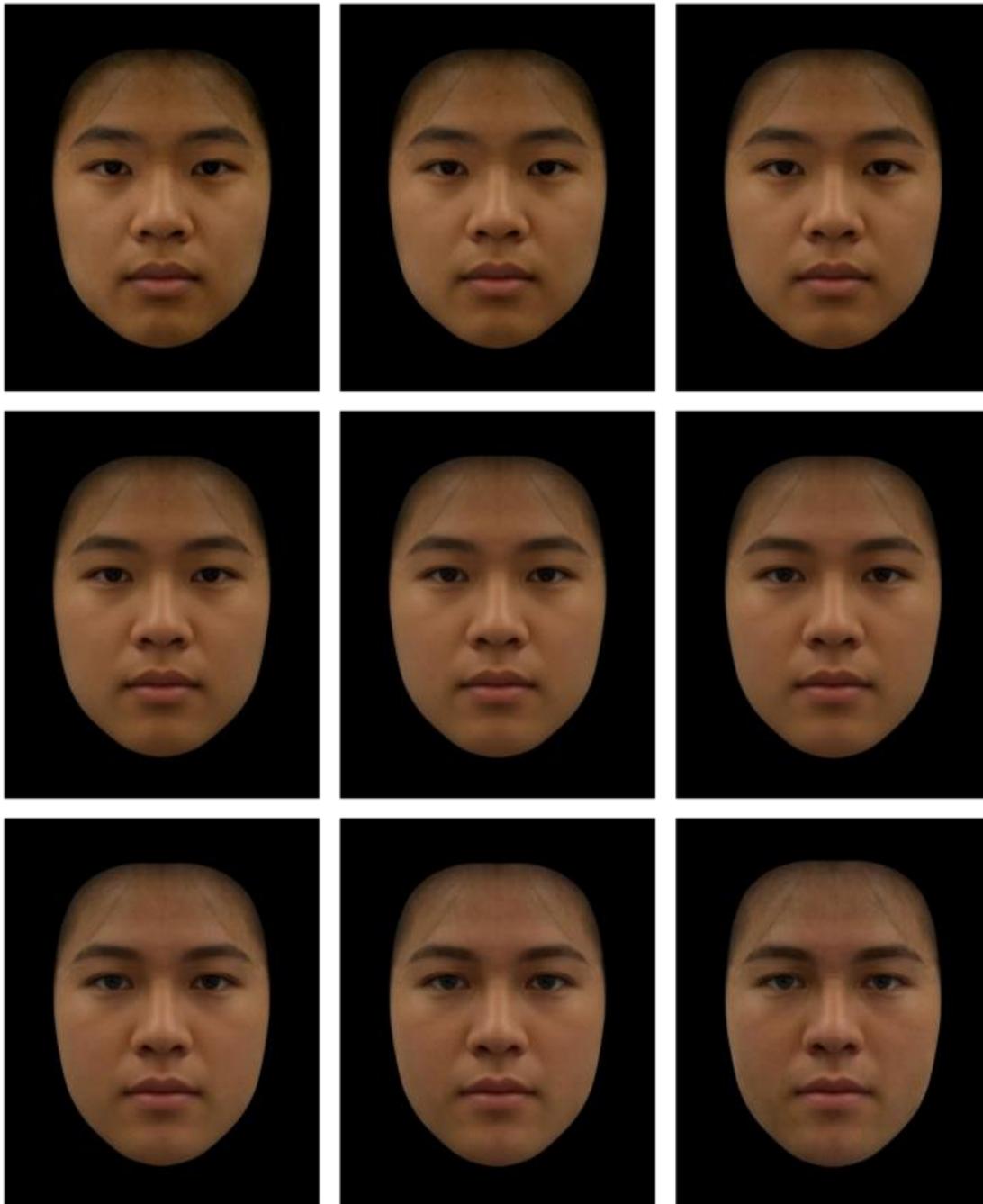
**Tables**

Table 1.

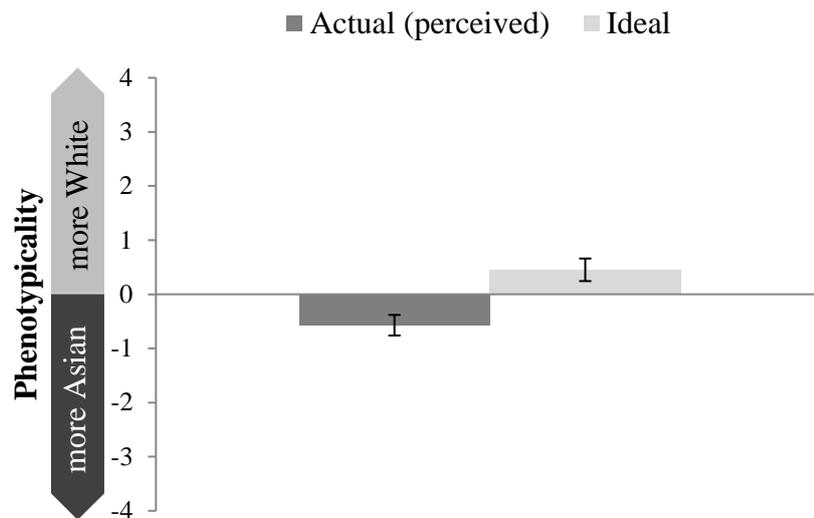
*Means and standard deviations of actual and ideal face selection scores by condition.*

	Actual face (perceived)	Ideal face
Control	-0.89 (1.91)	0.44 (2.20)
Racial discrimination	-0.59 (2.03)	0.47 (1.99)
Racial acceptance	-0.24 (1.86)	0.44 (2.18)

*Note.* Standard deviations are shown in parentheses.

**Figures**

*Figure 1.* Example matrix of faces, ordered from most “East Asian” (top-left) to objective actual (middle) to most “White” (bottom-right). Note that face positions were randomized when presented to participants.



*Figure 2.* Actual and ideal face perceptions. The y-axis represents participants' objective actual face at 0. Error bars represent standard errors of the mean.