PSYCHOMETRIC EXAMINATION OF THE COLOR-BLIND RACIAL ATTITUDES SCALE FOR USE AMONG ASIAN AMERICANS

BY

SEAN JEN CHENG

DISSERTATION

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Doctoral Committee:

Professor Helen Neville, Chair
Professor Hua-Hua Chang
Professor James Rounds
Associate Professor Yoon Pak
ABSTRACT

Our current understanding of color-blind racial ideology (CBRI) has evolved to recognize that CRBI manifests differently for Whites as compared with people of color. To date, few studies have investigated CBRI among Asian Americans, which is partially due to the lack of validated instruments for use with this population. The purpose of this study was to examine the structural equivalence of the Color-Blind Racial Attitudes Scale (CoBRAS; Neville et al., 2000) among Asian Americans as compared to Whites. A secondary analysis was conducted on a dataset comprised of 713 participants gathered from three published studies. Differential item functioning (DIF) was used to explore the psychometric properties of the measure. Results from the DIF using a LA-LOR estimate identified five items across two of the three CoBRAS factors as exhibiting DIF. Interpretation of the items demonstrating DIF were further classified into Educational Testing Service classification schema (Zieky, 1993) to identify the extent of item bias existing in the CoBRAS items. Possible explanations for sources of the item bias, as well as implications for future researchers using the CoBRAS measure with Asian Americans are discussed.
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INTRODUCTION

The face of America is ever-changing as Whites are projected to be in the racial minority by 2045 according to the latest U.S. Census reports (U.S. Census Bureau, 2012). Racial tensions among groups in the U.S. are ever-present, and the need to address intergroup relations is becoming an increasing salient and pressing issue (Pettigrew & Tropp, 2006; Sue et al., 2007). Psychology scholars have examined multiple expressions of racial tension including racial animus and the physiological and psychological impact of racism. Recent reviews (Paradies, 2006; Pettigrew & Tropp, 2006) of empirical studies found linkages between self-reported racism and negative mental health outcomes (e.g., psychological distress, depression, anxiety, stress, etc.) and negative physical health outcomes (e.g., hypertension) among racially and demographically diverse samples. Specifically, 16% of Asian Americans reported their physical health as poor or fair (Alvarez & Shin, 2013). Additionally, the incidence of liver cancer in Chinese, Filipino, Japanese, Korean, and Vietnamese populations have been reported to be 1.7 to 11.3 times higher than rates among White Americans (Miller et al., 2008).

Multiple studies have documented the deleterious effects of racism based on physiological indicators, though few studies have examined the psychological consequences of racism on people of color (Carter, 2007). Gee, Spencer, Chen and Takeuchi (2007) conducted the first nationally representative sample of Asian Americans which investigated the association between self-reported everyday discrimination and risks of developing a mental health disorders. The investigators found a significant linkage in higher reported incidences of discrimination with greater odds of individuals developing a diagnosable mental health disorder. Chou, Asnaani, and Hofmann (2012) found that perceived racial discrimination was associated with increased mental disorders across a racially representative sample of African Americans, Latinos and Asian
Americans. Similar studies have found Asian Americans experiences with discrimination have been associated with negative psychological well-being (e.g., Lee, 2003; Noh, Beiser, Kaspar, 1999). In their review, Williams, Neighbors and Jackson (2003) reported a significant connection linking experiences of discrimination with negative mental health outcomes (e.g., psychological distress), mental health disorders (e.g., major depression, generalized anxiety disorders) and increased substance use. In a recent meta-analysis, Lee and Ahn (2011) surveyed 23 studies to investigate the impact of discrimination on Asian and Asian American mental health. The findings were similar in that they found racial discrimination as significantly related to greater overall distress which was comprised of markers such as depression, anxiety and psychological distress. These findings provide compelling evidence showing how racism has long-lasting repercussions on racial and ethnic minorities by negatively affecting the emotional and psychological well-being of people of color. Given the reported findings from these studies, it may be inferred that racism is a continuing problem.

Despite the prevalence of racism and its consequences, many individuals have rationalized the societal inequities through the minimization of the role that race plays. Researchers termed this lack of racial awareness as racial color-blind beliefs, where individuals employ a cognitive filter to deny, minimize, and/or distort the existence of racism (Neville, Lilly, Duran, Lee & Browne, 2000). Color-blind racial ideology adopts a decontextualized view of individuals that minimizes their racial affiliation opting for a belief in a social system based on equal opportunity and meritocracy (Bonilla-Silva, 1997). The endorsement of color-blind racial beliefs serves to legitimize existing societal hierarchies through the disavowal of racially-based discriminatory behaviors and systems. Color-blind racial ideology provides a framework to
understand and explain the established power structure that privileges Whites over racial minorities.

Color-blind racial beliefs serve to buttress the extant racial hegemony and deepen racial inequity (Bonilla-Silva, 2009). Individuals espousing color-blind beliefs argue that racial inequities are further propagated by highlighting racial differences. In a post-civil rights era, the notion of race is called into question in so far as to adopt a racelessness perspective (Jones, 2015). In choosing to ignore race, the belief is that we can operate in a merit-based society in which individuals are judged by their actions and characteristics. Quite the contrary, the denial of racial group differences reinforces the status quo in maintaining the power differential of White individuals over other racial minorities (Schofield, 1986).

Although studies have examined color-blind beliefs among Whites, there is less research examining the implications for people of color that hold color-blind views. The research has generally demonstrated that people of color who hold color-blind beliefs report greater negative psychological consequences where they report feeling more marginalized and ignored in colorblind environments in comparison to other inclusive environments that adopt a multicultural perspective (Vorauer, Gagnon, & Sasaki, 2009). These findings support the notion that color-blind beliefs impact Whites differently than people of color given that color-blind racial ideology promotes the dominant White culture through a systemic process of marginalization of people of color (Bonilla-Silva, 1997).

Discussions regarding U.S. race relations have been historically conceptualized primarily in a Black-White dichotomy (Wu, 2005). Uba (2002) recognized Asian Americans as a part of the racial politics, but noted being neither Black nor White places them on the periphery of the racial discourse. The pattern holds true when considering how color-blind racial beliefs manifest
for Asian Americans. The term model minority has gained prominence in describing Asian Americans, whom have been lauded as a group that have achieved success in the face of adversity (Chou & Feagin, 2008). The incorporation of the stereotypical portrayal of Asian Americans as the model minority in popular society is explained by the mechanism of color-blind beliefs in supporting the underlying tenet of meritocracy.

**Purpose of the Study**

While there is research on how color-blind beliefs affect interpersonal relations and racial attitudes, there is a pressing need for more research to address the unique racial experiences of Asian Americans. One of the limitations has been the scarcity of psychometrically valid and reliable measures (Yoo, Steger, & Lee, 2010). A significant number of the quantitative studies in psychology on racial color-blindness have used the Color-Blind Racial Attitudes Scale (CoBRAS; Neville et al., 2000) (Awad & Jackson, 2015). The CoBRAS reported good validity and reliability estimates when administered among racially diverse groups; however, review of the initial scale construction studies show an under-representation of Asian Americans among the participants which calls into question the construct validity of the scale. Methodological advances in the field of quantitative psychology have further enhanced our understanding of validity with regards to psychological measurements in cross-cultural research (Byrne et al., 2009). The concept of structural equivalence becomes an important consideration in ensuring the latent trait is accurately measured across the different cultural groups. Structural equivalence pertains to the “extent to which the meaning and dimensional structure of a psychological construct are identical across cultural groups” (Byrne et al., 2009, p. 95).

In order to ensure valid group comparisons in future studies regarding CBRI and intergroup relations, it becomes a necessary step to ensure structural equivalence when
administering the CoBRAS to Asian Americans. Van de Vijver and Leung (1997) provided a
taxonomy to inform the proposed analysis as being theory-driven in examining the construct
validity of the CoBRAS measure by specifically investigating the contextual variable (i.e., race)
being a necessary characteristic in cross-cultural research, as in this case being cross-group
comparisons.

Initial studies expounding on color-blind racial ideology indicate that it manifests
differentially among people of color as compared with Whites (Speight, Hewitt, & Cook, 2015).
As Asian Americans are simultaneously portrayed as the model minority and other times
considered a perpetual foreigner (Lee et al., 2009), it leads us to conclude that Asian Americans’
racialized experiences vastly differ from Whites.

To answer the general research question - “Is there item bias present within the CoBRAS
measure?” - a differential item functioning (DIF) analysis was conducted using three existing
datasets from published articles. If findings indicate that the response patterns of Asian
Americans differed compared to Whites, then items within the CoBRAS may be considered to
exhibit DIF. This in turn would suggest that an item measure favors one group (i.e., Asian
Americans) over another (i.e., Whites) (Shealy & Stout, 1993). The identification of DIF would
demonstrate measurement nonequivalence where the items are not operating purely as a measure
of color-blind attitudes. Items exhibiting DIF were identified and subsequently categorized
using the ETS categorization scheme as a method of determining the degree to which bias is
present (Zieky, 1993).
LITERATURE REVIEW

In this chapter, I provide an overview of color-blind racial ideology to underscore the psychological construct as a facet of modern-day racism. Next, I expound on the two components of color-blind racial ideology: color-evasion and power-evasion. I then highlight the importance of incorporating Asian Americans in the discourse of color-blind racial ideology in order to broaden the scope when considering racial attitudes and its impact on intergroup relations. I discuss how stereotyping of Asian Americans (e.g., model minority stereotype) serves as a mechanism in which color-blind racial beliefs manifest in consideration of Asian Americans and its subsequent impact on intergroup relations and self-perceptions. Next, I highlight the Color-Blind Racial Attitudes Scale (CoBRAS) as the primary psychological instrument that serves as the operationalization of color-blind racial ideology. Subsequently, I provide a literature review of published works using the CoBRAS measure among diverse racial groups with special emphasis on Asian Americans. Lastly, I provide the rationale to investigate the psychometric properties of the CoBRAS for use among Asian Americans using the LA-LOR estimate as a non-parametric DIF analyses.

Color-Blind Racial Ideology (CBRI)

In a post-civil rights era, it becomes socially unacceptable to openly show prejudicial attitudes towards racial and ethnic minorities. Acts of prejudice and intolerance have instead become more subtle and indirect (Zamudio & Rios, 2006). The amount of variability in the interpretation of a discriminatory event can range from that of a racist act to an alternative rationalization on the basis of some factor other than race (McConahay, 1986; Schofield, 1986). Color-blind racial ideology (CBRI) is defined as the minimization and/or denial of the role that race plays in everyday interactions (Neville et al., 2000). It is within this system that individuals subscribe to the dominant racial ideology as it normalizes racial inequity and reinforces
messages to maintain the status quo (Bonilla-Silva, 2001).

Whereas overt racism endorses beliefs about racial superiority and social inequity, color-blind racial attitudes represents a denial of racism even in extending to challenge the notion of race itself (Bonilla-Silva & Dietrich, 2011). The basic concept underlying colorblindness is everyone is the same, and thus, we should treat everyone as an individual regardless of race. The rationale behind denying race is the belief that acknowledging the existence of racial groups highlights differences which then perpetuates discrimination (Tajfel & Turner, 1979). Any group differences are considered to be a superficial characterization and viewed as a form of stereotyping (Markus, Steel, & Steel, 2000). Therefore, proponents of CBRI choose to avoid or ignore race in interpersonal interactions under the belief that it would decrease racism (Peery, 2011).

Operating in a color-blind society sounds appealing at face value, however research has shown that CBRI serves to legitimize the social inequities within society (Gushue & Constantine, 2007). Neville and colleagues (2013) argued that achieving a truly racial color-blind society as being unattainable. In fact, color-blind beliefs have been described as a form of modern day racism where individuals espousing color-blind attitudes are complicit in a system that reinforces racial prejudice and/or inequality (McConahay, 1986). CBRI discounts racism, instead promotes the belief in a just society in which individuals are able to achieve success through their own merit (Bonilla-Silva, 2001; McConahay, 1986; Sears & Henry, 2005). The illusion of the “American Dream” promotes a just world fallacy that everyone can obtain success if they are willing to work hard enough. Subscription to the notion of a meritocratic society fuels the belief that many of our problems can be fixed if only we are to ignore race, which acts to divide us (Jones, 2015). The belief that race does not matter becomes problematic as it
ultimately perpetuates racism through the minimization of the role of race in intergroup relations.

Frankenberg (1993) outlined two distinct components of racial colorblindness where color-evasion is defined as the disavowal of race and power-evasion encompasses the inherent power differences imbedded within established racial hierarchies. Firstly, she described color-evasion as the minimization of the role that race plays in interpersonal interactions which effectively rejects the notion of White superiority. Individuals who operate from a color-evasion perspective tend to ignore the role that race plays; instead, tend to focus on people as individuals. This dominant racial ideology serves to promote White Privilege and the rationalization of acts of oppression. Those who endorse color-blind ideology tend to see individuals as being “all the same” and avoid discussions regarding the topic of race for fear that focusing on differences would elicit prejudice. Though not explicitly utilizing the term of color-evasion, Schofield (1986) described this aspect of CBRI metaphorically as individuals donning a polite veneer of ignoring race in order to smooth race relations from avoiding conflict and feelings of awkwardness. However, the consequence of adopting this color-evasion approach in treating everyone the same leads people to engage in racially insensitive behavior as the belief minimizes the lived experiences of racial minorities (Holoien & Shelton, 2012).

In continuing with Frankenberg’s exposition of CBRI, the power-evasion component of CBRI sets itself apart from the color-evasion perspective as it specifically relates to the denial, minimization and/or distortion of the power dynamic within society rather than on an individual’s race. Frankenberg (1993) noted how the power-evasion perspective of CBRI ignores the inherent unequal distribution of power, which serves to perpetuate and maintain racial inequities. The premise underlying the power-evasion component is the idea of a meritocratic society where individuals have equal opportunity to succeed. The power-evasion
perspective whereas focus on racism at the individual level where it needs to be considered at the systemic and institutional level (Bonilla-Silva 1997; 2001).

**CBRI and Asian Americans**

Little has been written that explicitly connects racial colorblindness with the racialized experiences of Asian Americans. The following describes the discrimination experiences among Asian Americans in consideration of both the color-evasion and power-evasion perspectives of CBRI. It becomes necessary to include an examination of popularized portrayals to provide the contextual framework of Asian Americans in the U.S. in recognition that stereotyping of racial minorities acts as the mechanism to which racial inequities are legitimized (Speight et al., 2015). A brief summary of the model minority stereotype (MMS) provides the contextual backdrop in elucidating the multiple facets of CBRI.

**MMS.** In 1966, the first instance of the MMS surfaced in a *New York Times* article portraying Japanese Americans as having high educational attainment, high median family income, low crime rates, a lack of juvenile delinquency, and a lack of mental illness (Tang, 1997). Shortly afterward, a similar story was printed in *U.S. News & World Report* reporting on Chinese Americans further perpetuating their apparent success (Zhang, 2010). Public perception has been shaped by commonplace portrayals of “whiz kids” touting impressive educational attainments originating from impoverished backgrounds serving to illustrate the American dream (Peterson, 1966). The MMS has since become a popularized belief regarding all Asian Americans as having achieved comparable levels of educational achievement and annual household income as Whites, but more importantly, achieving greater levels than other minorities (Tang, 1997).
In truth, a bimodal distribution describes Asian Americans with one end consisting of a low-pay, low skill group and the other a more educated, higher paid professional group (Lee, Wong, & Alvarez, 2008). For instance, the median family income of Asian American households (i.e., $74,297) appear significantly higher than the national average (i.e., $53,657) (U.S. Census, 2014). In further elaborating on the bimodal nature of Asian Americans, the poverty rates of Asian Americans (i.e., 12.5%) it is comparable to the average poverty rates in the U.S. (i.e., 15.5%)(U.S. Census, 2014). However, the poverty rates for Hmong (28%) and Cambodian (18%) are among the highest of any groups in the U.S. Furthermore, the number of Asian Americans in poverty rose by 37% compared to the national increase of 27% between 2007 and 2011 (Ramakrishnan & Ahmad, 2014). These statistics shed light to the wide breath and diversity composite within the Asian American and Pacific Islander communities that are otherwise masked by the aggregate data.

The positive stereotype masks the underlying diversity comprising Asian Americans in the U.S. The CARE report (2008) challenges the common misconception of Asian Americans as a monolithic group by noting how:

In reality, there is no such thing as one Asian American and Pacific Islander composite, especially when there are more difference than similarities between the many groups designated by the federally defined categories “Asian American” and/or “Pacific Islander.” Although there are varied and historical reasons for reporting these groups under one umbrella, it is critical for educators and policymakers to recognize that there are numerous Asian American and Pacific Islander ethnicities, many historical backgrounds, and a full range of socioeconomic spectra, from the poor and underprivileged to the affluent and highly education. There is no simple description
that can characterize Asian American and Pacific Islander students or communities as a whole. (p.15)

It is important to disaggregate the information on Asian Americans given the diversity of ethnic representation of Asian Americans in the U.S. and complexity inherent among its various ethnic groups.

Despite numerous sources citing the inaccuracies of the MMS (e.g., Wong & Halgin, 2006, Wu, 2002; Zhang, 2010), the stereotype persists and continues to be popularized in mainstream media. The MMS therefore promotes an erroneous perception that Asian Americans no longer experience racism and discrimination even to the extent that their status as a minority is questioned (Tuan, 1998). Implications of this positive stereotype adversely affect Asian Americans where policies limit the allocation of services such as bilingual education, affirmative action, health care and welfare (Lee, Wong, & Alvarez, 2009).

It is largely unrecognized that Asian Americans continue to be targets of individual, institutional and cultural racism (Alvarez, 2009). There is substantial documentation that Asian Americans are still targets of racially motivated attacks and hate crimes (Chou & Feagin, 2008). A few notable examples of incidents of racially motivated attacks on the Asian American community are the brutal 1982 murder of Vincent Chen and the 1999 witch-hunt cast upon Dr. Wen Ho Lee during a time of national hysteria reminiscent of the Cold War (Li & Wang, 2008). Several events in recent years have been reported which demonstrate the general public’s rejection of Asian Americans’ claim to their American nationality. In the 2008 Super Bowl, the nation was met with a 30-second commercial portraying an animated Pandas replete with Asian-themed stereotypes and broken English. The executive of the company responsible for the advertisement was reported to have intentionally made it racist in pursuit of the title “worst
Super Bowl commercial” (Tung, 2008). Instead of public outcry, the commercial spot generated millions of dollars in revenue for the company. In an unrelated incident, the headline, “We like Hirally! She best quality!” was published in blog posting by a *Time* magazine reporter (Cullen, 2008). The article outlined the reporter’s analyses on Asian Americans’ candidate and voting preferences for the upcoming 2008 presidential election. The article itself was not racist, the headline drew outcry in various Asian American online forums. Clearly, overt acts of racism still occur; although, racist acts manifest in a variety of settings affecting the lives of Asian Americans.

**MMS and CBRI.** In applying the CBRI framework as the underlying process, we can understand the multiple implications of the MMS. Linked with the model minority stereotype is the image of Asian Americans as being “Honorary Whites” (Tuan, 1998). The term “Honorary Whites” has been applied to Asian Americans in effort to elevate them to the social standing as their White counterparts where proponents of this perspective cite the high median income, educational attainment, significant representation of Asian Americans within technical and professional positions, and intermarriage rates with Whites (Tuan, 1998). The grouping of Asian Americans along with Whites speaks to the intent of portraying the image of a racial minority group achieving success, which unfortunately has the consequence of distancing Asian Americans from other racial minorities (Zhou, 2004). The relabeling of Asian Americans as Whites makes racial categories somewhat arbitrary, though the act in switching racial categories of Asian Americans demonstrates the embedded power of the dominant majority to reassign racial categories to others. The reclassification of Asian Americans carries with it the underlying privilege of “Whiteness” as it implies mobility, equality, civic participation, or identification with power (Bow, 2010).
The color-evasion perspective of CBRI promotes the notion of “sameness” effectively erasing the minority status of racial minorities as well as discounting the inherent challenges facing them. Unique to Asian Americans, they are the only minority group of convenience where their minority status can be assigned and, in other situations, be excluded (Hall, 2014). In disavowing race, the unique experiences of racism facing Asian Americans are discounted and ignored. Asian Americans are routinely not considered as a minority group particularly in the context of higher education, though they are counted when university officials struggle to diversify its student or faculty enrollment. Situations in which Asian Americans are discounted as being considered a racial minority are situations when they are over-represented, paradoxically, the same logic is not applied to Whites (Wu, 2005). As an illustrative example of Asian Americans internalizing CBRI through adopting a color-evasion perspective, Marinari (2005) conducted an ethnographic study of a predominantly White high school within a New Jersey suburb to further explore the intrapersonal dynamics among the Asian American students with Whites. The prevailing culture of the Bergen County Regional School (BCRS) wholly endorsed a color-blind mentality. The following statement by one of the White students described the pervasive sentiment where

“…nobody knows what to make of the Korean students because people here just don’t want to deal with anything different. (BCRS) is like a big blanket and once you are here, you just want to be swept up into it and be nice and comfy.” (p.384)

Results of the study reported Korean American students shedding vestiges of their own culture through avoidance of behaviors that reflected their Korean heritage, in essence to be “culture free,” as means of assimilating with the White students. Their efforts were described as
an adoption of White mainstream culture to the color-blind belief that racial differences would lead to discriminatory attitudes levied against them.

Serving as a contrast, a subgroup of Korean students at BCRS chose to mainly associate with other Koreans, opted to speak Korean over English whenever possible, and dressed in styles consistent with Korean culture which deviated from the American mainstream. These Korean students were viewed more negatively gaining the label FOBs (“fresh off the boat”) and were the topic of recurring complaints and criticisms. Marinari (2005) explained the Korean Americans who chose to become “symbolically white” demonstrated their prioritization of their academic achievement at the expense of their Korean heritage.

The popularized stereotype of Asian Americans as the MMS supports the notion of meritocracy in the U.S. through the social narrative of newly arrived immigrants in the U.S. achieving tremendous success having overcome adversity. From the perspective of the power-evasion aspect of CBRI, publicized examples of Asian Americans succeeding in the U.S. serves as proof that the system of meritocracy is alive and well. The MMS promotes the belief in a meritocratic society in which the successes of members are based on their merits and effectively silences claims of societal inequities and institutional discrimination (Healy, 2013). The repercussion of this constructed stereotype is that it focuses on individuals and lauds their successes. Conversely, it blames them for their shortcomings rather than the role that the power structure plays in the occurrence of racism. The MMS serves as the example for other minorities that success in America can be achieved as long as one works hard enough. Healey (2012) described Asian American success as

… proof that American society is truly the land of opportunity and that people who work hard and obey the rules will get ahead…[He] pointed out that a belief in the openness
and fairness of the United States can be a way of blaming the victim and placing the responsibility for change on the minority groups rather than on the structure of society or past-in-present or institutional discrimination. Asian success is sometimes taken as a ‘proof’ of the validity of this ideology. The none-too-subtle implication is that other groups (African Americans, Hispanic Americans, American Indians) could achieve the same success as Asian Americans but, for various reasons, choose not to. (p. 369)

Despite numerous sources citing the inaccuracies of the MMS (e.g., Chin, 2001; Wong & Halgin, 2006; Wu, 2002), the stereotype persists and continues to be popularized in mainstream media. The legitimization of the MMS serves as evidentiary support that success is achievable through individual merit, laying claims of social inequity to rest (Rosenbloom & Way, 2004).

CBRI addresses the context in which the racial status quo exists and continues to be perpetuated. The MMS serves to legitimize social inequality by portraying Asian Americans as a successful group of individuals that other racial minorities are meant to emulate. Other individuals who espouse the MMS elicited negative attitudes as they were viewed as competition (Ho & Jackson, 2001). Wong, Lai, Nagasawa, and Lin (1998) assessed the level of endorsement of the MMS among Asian American, African American, Native American, Hispanic, and White college students at a predominantly White university. Students from all five racial groups rated the academic performance of Asian Americans higher than the other minority groups. Similar results emerged when asked to compare the perceived motivation to do well in college and to compare the probability of success in careers between the five racial and ethnic groups. The pervasiveness of the MMS exhibited itself when every group, even Asian American themselves, rated Asian Americans as most likely or best suited to succeed academically as well as in their chosen vocations. The MMS is particularly harmful in that it sets Asian Americans in direct
competition against other racial and ethnic minorities (Hartlep, 2013). The MMS also fails to account for contextual factors where historical discrimination has affected Asian Americans as well as other racial minorities.

Despite the long history of racist acts targeting Asian Americans, the MMS perpetuates the “tacit assumption that such a 'privileged' status has shielded Asian Americans from having to deal with racism” (Alvarez, Juang, & Liang, 2006, p. 477). Delucchi and Do (1996) conducted a qualitative study directly highlighting the general complacency in regards to acts of racism perpetuated against Asian American. Their investigation documented the disparate reactions of the University of California administration in response to two separate racist events. The first event involved members of a White fraternity house portraying themselves as Black slaves for auction. News of the incident was met with both formal reprimands by University administration and outrage by university students. The second event involved a White student who assaulted and severely battered an Asian American student. The assailant, who was released on bail the following day, subsequently continued to harass the victim. University officials labeled the incident as an “unfortunate” act of violence and were unwilling to recognize the role of race in the assault despite contrary evidence and student-led protests. The investigators explained the apathetic reaction of university administrators stemmed from the widely held perception of Asian Americans not being perceived as a disadvantaged group as consistent with the MMS.

Endorsement of CBRI

Individuals adopting racial color-blind beliefs employ a cognitive schema used to justify and legitimize racial inequities and benefits afforded to Whites (Sue, 2003). Previous research studies have consistently demonstrated Whites as endorsing higher scores of CBRI as measured
by the Color-Blind Racial Attitudes Scale more so than other racial groups (e.g., Awad et al., 2005, Neville et al., 2000; Worthington, Navarro, Loewy, & Hart, 2008). It is not surprising that Whites would be more likely to endorse CBRI as they benefit from the inherent privileges provided by such a system along with secondary long-term psychological gains such as a positive self-esteem (Jost & Thompson, 2000).

The reason why racial and ethnic minorities would also endorse CBRI is less apparent. Speight et al. (2015) argued that people of color who endorse CBRI perpetuate stereotypes in support of familiar beliefs and attitudes, which serves to justify societal inequities and effectively maintain the status quo. Racial minorities holding color-blind racial beliefs, similarly, would disavow the importance of race, but additionally would have a facet of internalized racism in adopting the racist stereotypes and ideologies promoted by the White dominant society (Pyke, 2010). Dissenting members holding contrary attitudes may then struggle with psychological distress as a result from cognitive dissonance in which their perspective runs contrary to the mainstream belief. Speight et al. (2015) proposed that when individuals are faced with racial injustice, they are (often subconsciously) motivated to act in a way that is consistent with views consistent within the CBRI context. The alternative would be to act against the perceived injustice, which may then cause individuals to have feelings of uncertainty and fear. Speight et al. (2015) contends it is easier to maintain the status quo due to its familiarity and subsequent expectations are aligned with preconceptions of societal beliefs.

Conceptualization of the MMS within the context of CBRI serves as an explanatory framework that accounts for both the positive and negative stereotypes coexisting. Positive stereotypes such as the MMS and its affiliate term of Honorary White serve to promote the White hegemony, which is further bolstered by the belief of a meritocratic society (Lee, 1996).
Conversely, those individuals that do not fit into this racial trope are dismissed as a societal outcast through the label as being a Perpetual Foreigner. Both positive and negative stereotypes effectively serve to disenfranchise Asian Americans as a whole. These racial constructs serve to prop the ideology of the dominant White culture and, at the same time, act as a wedge against other racial and ethnic minorities.

**Impact of CBRI on Intergroup Relations**

There is a growing body of literature demonstrating that CBRI has adverse effects on both Whites and persons of color who adopt them (Jones, 1997). Holoein and Shelton (2012) found a deleterious effect of endorsing color-blind racial beliefs to both perpetuators and targets of acts of racism. Sasaki and Vorauer (2013) found short-term positive effects, but cited how maintaining CBRI has negative implications on interpersonal relations in the long run. Park and Judd (2005) conducted a review of studies pertaining to intergroup relations and found no empirical support between group categorization (i.e., stereotyping) and intergroup bias and prejudice. The results of their examination suggested that categorization is not the cause of intergroup conflict, but more of a consequence or justification of discriminatory behaviors.

People of color adopting CBRI may prove to be particularly harmful as it promotes the concept of racelessness (Speight et al., 2015). This color-blind approach to race may alienate those for whom their racial heritage matters by disregarding a particularly salient identity and consequently diminish aspects of their sense of belonging and self-worth. For instance, Alvarez and Juang (2010) reported that using avoidance and denial as a means of coping with racism was associated with higher levels of psychological distress and lower levels of self-esteem among an adult sample of Filipino Americans. When people of color adopt this color-blind ideology, they
may internalize societal messages that marginalizes and devalue their ascribed racial group which in turn may lead them to the belief that adopting the mainstream White identity and distancing themselves from race will enhance their opportunities for success (Marinari, 2005).

**Color-Blind Racial Attitudes Scale (CoBRAS)**

CBRI is a robust psychological construct that provides an overarching explanation of how racial inequities are maintained through stereotyping and allows for a deeper understanding of its multiple implications of racial attitudes and impact on subsequent social interactions. Neville et al. (2000) developed the CoBRAS as a significant advancement in the field in enabling researchers to capture the complex multidimensional racial ideological construct. Neville and her colleagues used a principal component analysis and confirmatory factor analyses to identify the CoBRAS’ three factors: White Privilege, Institutional Discrimination, and Blatant Racial Issues. White Privilege pertains to the individual’s unawareness to the unearned racial privileges afford to Whites (e.g., “White people in the U.S. have certain advantages because of the color of their skin”). Institutional Discrimination refers the unawareness of established forms of racial discrimination as practiced by institutions (e.g., “Due to racial discrimination, programs such as affirmative action are necessary”). Blatant racial issues refer to the unawareness towards the pervasiveness of racial discrimination (e.g., “Social problems in the U.S. are race, isolated situations”).

In the initial validation study, Neville and colleagues (2000) reported on the development of the items, construct validity of the scale (via exploratory factor analysis), and further validation through confirmatory factor analysis and associations between the CoBRAS and theoretically constructs. The initial three-factor structure of the CoBRAS was supported by the findings from the confirmatory factor analysis (CFA). They found that greater levels of color-
blind racial beliefs were significantly related to increased endorsement of modern racism attitudes and gender and racial prejudice, as well as lower levels of a belief in a just world (i.e., that good things will happen to good people and bad things will happen to bad people). The Cronbach’s alpha coefficients for the subscale and total scores were acceptable and ranged from .70 (Blatant Racial Issues) to .91 (CoBRAS total).

Since the initial validation study, there has been growing support for the psychometric properties of the CoBRAS across various racial groups. For example, significant associations have linked color-blind racial beliefs as assessed by the CoBRAS to theoretically relevant constructs including lower levels of empathy and racial sensitivity among a sample of primarily White therapists (Burkard & Knox, 2004), lower multicultural counselor competencies among primarily White counselors (Chao, Wei, Good, & Flores, 2011; Neville, Spanierman, & Doan, 2006; Spanierman, Poteat, Wang, & Oh, 2008), and greater levels of racial fear among White students and applied psychology trainees (Spanierman & Heppner, 2004; Spanierman et al., 2008). These investigations regarding color-blind beliefs have allowed further insight to the manner in which White individuals may deny or distort the existence racism, thereby maintaining the privileges afforded to them through the legitimization of the current system. In these studies the reliability estimates were for the most part acceptable with alpha coefficients for the total scale ranging from .85 (Neville et al., 2006) to .91 (Neville et al., 2000).

CoBRAS among Racial and Ethnic Minorities

There has been limited research on the linkage between the endorsement of color-blind racial beliefs and related constructs among racial and ethnic minorities. Findings from the initial studies in this area suggest that racial color-blindness can be meaningful among racial minority groups, particularly African Americans, and are related to the endorsement of beliefs that support
the status quo and limit the awareness of racism in one’s own life. For example, Neville and colleagues (2005) examined the association between racial color-blindness and psychological false consciousness (or the degree to which individuals work against the interest of their social identity group) among African American students and community members. Supporting their research hypotheses, they found that greater levels of racial color-blind beliefs were related to increased victim-blame beliefs for racial inequalities and higher levels of endorsement of social dominance attitudes. In another study, Barr and Neville (2008) investigated the effect that parental socialization messages have on children among a sample of college students and their parents. They found that students who reported receiving fewer messages about the existence of racism growing up not surprisingly reported greater levels of racial color-blindness, and similarly parents’ who reported providing their child with fewer messages about the potential harms racism reported greater color-blind racial beliefs. In a subsequent study, Barr and Neville (2014) found that color-blind beliefs moderated the relationship between parental racial socialization and mental health status of African American college students.

Investigators have started to examine the role of color-blind beliefs within intergroup perceptions among racial and ethnic minorities. A review of the literature yielded a study in which Kohatsu and his colleagues (2011) examined the linkage between color-blind beliefs and perceptions of Asian Americans among a sample of Latino college students. The results were contrary to their initial hypothesis as they anticipated CoBRAS scores to be predictive of Anti-Asian prejudice. The investigators explained how individuals’ personal experiences with Asian Americans may counter stereotypical perceptions of their social abilities.

**Is the CoBRAS Generalizable to Asian Americans?**
There is growing psychometric support for the CoBRAS when administered among various racial and ethnic groups. In the original construction study (Neville et al., 2000), the CoBRAS was validated across four racial groups: White European Americans, African Americans, Latinos, and Asian Americans. However, the limited sampling of Asian American participants in the scale’s initial construction and validation studies may prove problematic. Approximately 3% of the participants (n = 10) were Asian American in the development of the scale’s factor structure. In the subsequent study in which the CFA was performed, only 2% of participants (n = 12) surveyed were Asian American. Similarly, in the remaining validation studies in which the 2-week test-retest reliability estimates and other validity information was obtained there were low representations of Asian Americans with percentages ranged from 1% (n = 1) to 16% (n = 7) of the total respondents. Given the low representation of Asian Americans in the initial scale construction study, there are validity concerns that the CoBRAS may not capture the color-blind racial phenomenon among Asian Americans.

A review of the extant literature identified only a handful of studies using the CoBRAS measure along with an Asian American sample. Initial findings suggest that Asian Americans may benefit from adopting color-blind beliefs as it serves to buffer them from perceived discrimination. Or at least, may not be negatively affected by endorsing CBRI as they may rely on other internal resources to ameliorate the negative effects of racism. In their study, Chen, LePhuoc, Guzman, Rude, and Dodd (2006) reported on the linkage between color-blind racial beliefs and Asian American racial identity. Contrary to their hypothesis, the cluster group most closely associated with the Internalization status (i.e., individuals holding positive attitudes toward their racial group) had elevated scores along two dimensions of the CoBRAS – Institutional Racism and Racial Privilege. The researchers cited pseudoinddependence as a
possible description for individuals in the Internalization cluster whom are characterized as exhibiting an intellectualized sense one’s racial affiliation that allows them to deny incidences as race-related. Given that their findings contradicted the anticipated outcomes, they offered an alternative explanation citing social desirability as a possible reason for the uncharacteristic responses.

Several other studies provide limited insight into the application of the CoBRAS with Asian Americans. Spanierman and colleagues (2008) found support for a causal mediation model between openness to diversity and color-blind racial attitudes across college students (i.e., Whites, African Americans, Latino). Their investigation used an abbreviated 14-item version of the Color-Blind Racial Attitudes Scale (CoBRAS-SF; Neville, Low, Liao, Walters, & Landrum-Brown, 2007). However, the Asian American subsample could not be included in the analysis given their low reliability estimate ($\alpha = .37$) compared to the reliabilities of the Black/Latino and White samples ranging from .71 to .76, respectively. Similarly, Neville et al. (2009) reported low alphas for Asian Americans in their series of empirical investigations that validated color-blind racial beliefs as a legitimizing theory, namely a racial ideology that maintains the racial status quo. In sum, there is only one published study of the CoBRAS among Asian Americans which has reported acceptable reliability estimates for the scale, and there is no study that has examined the factor structure of the CoBRAS among a sample of Asian Americans.

Tawa, Suyemoto and Roemer (2012) examined Asian Americans’ experiences of racism and its impact on their psychological well-being (i.e., collective self-esteem). The researchers designated experiences of racism to perceived interpersonal racism and perceived structural racism. Though they did not directly investigate Asian Americans’ endorsement of color-blind racial beliefs, their investigation used an adapted form of the CoBRAS since there are no existing
instrument that specifically measures perceived structural racism. Tawa and his colleagues reasoned that the CoBRAS measures the lack of awareness of racism as a structural system which led them to reverse score the participants' results in order to measure the intended construct. As it relates to the purpose of this study, the reliabilities of the three subscales were Racial Privilege (α = .71); Institutional Discrimination (α = .44) and Blatant Racial Issues (α = .64). The full scale score was used given the low reliabilities for two of three subscales.

Taken as a whole, there has been mixed psychometric support of the CoBRAS when administered to Asian Americans. There is one empirical study that provides good reliabilities of the CoBRAS with a sizeable number of Asian American participants. Even then, the findings of the study ran counter to the anticipated outcomes in the association of the internalization cluster of Asian American identity and elevated color-blind racial attitudes. Other studies (e.g., Neville et al., 2009; Spanierman et al., 2008) investigating examining color-blind racial attitudes among a racially diverse sample explicitly excluded Asian Americans from analysis due to low reliabilities. As such, questions regarding the construct validity of the CoBRAS measure pertaining to Asian Americans can be raised.

Identifying Potential Item Bias through Differential Item Functioning (DIF)

There is increasing depth and understanding within the psychometric field about the validity of measures. In regards to construct validity, reliability is necessary, but not a sufficient condition. A subtle, but important, distinction in adding to the conceptual framework of validity is that not only is the measure being validated, but also the inferences one makes from a measure (Zumbo, 2007). The CoBRAS is purported to report meaningful group differences along the latent trait (i.e., color-blind racial beliefs). Conceptually, respondents to the CoBRAS should
perform about equally well as it relates to measurement of color-blind racial beliefs regardless of specific group memberships such as gender, race or ethnicity (O'Neill & McPeek, 1993). However, there are occasions where respondents may respond differently to a particular item based upon group membership (e.g., race). In this scenario, the item would be described as exhibiting item bias where observed differences are not due to the true score; instead, the difference would be due to the item favoring one group over another. An item that unfairly favors one group over another, though the two groups have the same probability of endorsement is termed item bias, otherwise known as Differential Item Functioning (DIF) (Roussos & Stout, 1996).

The nature and extent to which the CoBRAS exhibits potential item bias may be evaluated using contemporary analytic tools. DIF methods allow researchers to analyze whether items are functioning similarly for participants along a specific latent trait across different groups (Clauser & Mazor, 1998). Typically, item bias is assessed using the framework of differential item functioning (DIF) defined as a difference in the measurement properties of an item for two demographic groups. The DIF analysis used the Liu-Agresti estimator is an adaptation of the widely used Mantel-Haenszel (MH) (1959) procedure. In essence, the MH procedure is a chi-squared contingency table based approach which examines differences between the reference and focal groups on all items of the test. As the present study is interested in the responses of Asian Americans, the grouping criteria by racial groups identified Asian Americans as the focal group compared with Whites as the reference group. Conceptually, Asian American and White respondents who endorse color-blind beliefs at the same level should endorse an item similarly. If there is an occurrence of DIF, the difference in the response can be attributed to bias.

DIF proves itself to be an invaluable tool in the cross-cultural examination of latent
constructs (Van de Vijer & Leung, 2001). Though the CoBRAS is a measure of racial attitudes, other fields such as personality psychology have benefitted from DIF procedures in examining the psychometric properties of existing assessments (Smith, 2002). Smith and Reise (1998) analyzed the item content of the Stress Reaction Scale of the Multidimensional Personality Questionnaire. The DIF results showed a gender differentiation pattern where women were more likely to endorse items on emotional vulnerability and help-seeking, whereas men were more likely to endorse items regarding irritability and tension. In another example, Cooke, Kosson, and Michie (2001) found items on the Psychopathy checklist revised (PCL-R; Hare, 1991) operated similarly for African American respondents when compared to White respondents. In a recent study, Church and his colleagues (2011) investigated the application of the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992), a widely used personality measurement, among participants from the United States, Philippines and Mexico. They found a significant percentage of items exhibiting DIF and cautioned researchers in the cross-cultural comparisons of the personality profiles. The previous examples illustrate how the identification of items exhibiting DIF allowed for an analysis of the scale construct that would have otherwise been inaccessible.

In a recent study, Wetzel and Hell (2013) investigated the General Interest Structure Test (Allgemeiner Interessen-Struktur-Test: AIST-R; Bergmann & Eder, 2005) to determine whether gender differences existed among the items. Results identified gender-based bias among several items that were found to favor men along technical, mechanic inclined items along with computer-related items and other items were found to favor women for items associated with drawing decorating and helping-related items (Wetzel & Hell, 2013).

Continuing research on CBRI allows us to deepen and further our understanding of racial
attitudes and its impact on intergroup relations. Researchers have called for further examination of color-blind attitudes and how it manifests for people of color (Neville et al., 2013; Speight et al., 2015). Specifically, this necessitates the need for validated instruments for racial and ethnic minorities (Awad & Jackson, 2015). The possibility of item bias is raised due to the under-representation of Asian Americans in the initial scale construction study and poor reliabilities in subsequent published studies using the CoBRAS measure with Asian American participants.

I propose to investigate the structural equivalence of the CoBRAS measure by comparing Asian Americans responses with Whites. In reviewing the racialized experiences of Asian Americans, commonly referenced stereotypes such as the MMS, perpetual foreigner, and Honorary Whites were highlighted and discussed in terms of the color-evasion and power-evasion perspectives of CBRI. It becomes necessary to acknowledge these racialized constructions of Asian Americans to provide the contextual basis as the CoBRAS measure may not be as sophisticated in distinguishing color-blind racial attitudes apart from the aforementioned stereotypes.

**Purpose and Research Questions**

The purpose of the current investigation is to analyze whether the CoBRAS, the most widely used scale measuring the power-evasion component of CBRI, functions equivalently for Asian Americans as Whites. Item bias among the CoBRAS will be determined through a DIF analysis using the LA-LOR cumulative common odds ratio, a non-parametric DIF estimate. It is hypothesized that items related to stereotypical portrayals of Asian Americans (e.g., model minority) will exhibit item bias given that CBRI manifests differently for people of color than Whites. The identification of item bias does not necessarily dictate the exclusion (or inclusion) of items. Eliminating items based on a categorical criteria of items exhibiting bias may lead to
the exclusion of items that would render the scale unusable due to there being too few remaining items (Hambleton, 2006). Instead, DIF items will be examined on the degree that item bias is present using a categorization schema developed by the Educational Testing Service (ETS) and implications of the findings will be discussed. In sum, I will investigate whether 1) CoBRAS items operate differently for Asian Americans compared with Whites and 2) if DIF is present, the subsequent step will be to examine the degree of DIF and provide probable explanations for contributing sources of the observed item bias.
METHOD

Participants

Participants were 506 White respondents and 207 Asian American respondents. Participants ranged in age from 18 to 40 years ($M = 20.46, SD = 1.98$). The participants identified as male ($n = 254$) and female ($n = 459$). Four participants did not specify their gender. There was a diverse ethnic representation among the Asian American sample (Table 1).

Participants included in the study were comprised from a compilation of three previous research projects from a university in the Northeast and two universities from the Midwest. Participants were undergraduate students recruited from undergraduate courses as well as a campus-wide survey sent out to all incoming freshman students. Those who did not self-identify as either White or Asian/Asian American (e.g., African Americans, Latinos, Multiracial) were excluded from subsequent analyses. International students were also omitted from the analyses as it would introduce a confounding variable (i.e., acculturation) to study (Kim, 2008). Participants who were 1.5 generation (emigrated to the U.S. at age 12 or younger) were included as researchers suggest such individuals would have spent adequate time to acculturate to U.S. culture and customs (Kim, Brenner, Liang & Asay, 2003).

Measures

Color-Blind Racial Attitudes Scale. A 20-item measure that assesses individuals’ color-blind racial beliefs (see Appendix A). Items are rated on 6-point Likert scale rating ranging from 1 (Strongly Disagree) to 6 (Strongly Agree). Higher scores on the measure represent individuals’ greater endorsement of color-blind racial attitudes. The CoBRAS is comprised of three subscales identified as Racial Privilege, Institutional Discrimination, and Blatant Racial Issues.
Table 1. *Ethnic Breakdown of Asian American Participants*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>62</td>
<td>30</td>
</tr>
<tr>
<td>Filipino</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Indian</td>
<td>29</td>
<td>14</td>
</tr>
<tr>
<td>Korean</td>
<td>43</td>
<td>21</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>31</td>
<td>15</td>
</tr>
<tr>
<td>Other ethnicity</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total (n)</strong></td>
<td><strong>207</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Note. Other Ethnicity includes Thai, Sri Lankan, Pakistani, Japanese, Asian, Bengali, Burmese and Cambodian.*
Racial Privilege may be described as the non-recognition of White Privilege (e.g., “White people in the U.S. have certain advantages because of the color of their skin”). Institutional Discrimination constitutes individuals’ lack of awareness towards institutional forms of racial discrimination and exclusion (e.g., “Due to racial discrimination, programs such as affirmative action are necessary to help create equality”). Lastly, Blatant Racial Issues pertain to individuals’ disavowal of the pervasive of racial discrimination in society (e.g., "Social problems in the U.S. are rare, isolated situations").

The mean scores for the CoBRAS along its composite subscales are Racial Privilege ($M = 24.62, SD = 6.05$), Institutional Discrimination ($M = 23.96, SD = 6.04$), Blatant Racial Issues ($M = 15.22, SD = 3.90$). The mean scores and standard deviations for each CoBRAS item among the Asian American participants can be found in Table 2.

There are two published studies to date that have reported the reliability of the CoBRAS with a significant Asian American population (Chen et al., 2006; Tawa, Suyemoto & Roemer, 2012). The coefficient alphas for the three subscales in the study by Chen and colleagues were Racial Privilege = .78, Institutional Discrimination = .79, and Blatant Racial Issues = .75. These were comparable to the reliabilities reported in the initial validation study for the three subscales were .83, .81, and .76, respectively. Tawa, Suyemoto and Roemer (2012) used the total-scale score in their study given that two of the three subscale had low reliabilities (Racial Privilege = .71; Institutional Discrimination = .44, and Blatant Racial Issues = .64). The reliabilities of the CoBRAS measure in the current study are Racial Privilege = .73; Institutional Discrimination = .68, and Blatant Racial Issues = .45.

Demographic Questionnaire. Each study created a demographic questionnaire for their own purpose. The common data collected across the studies included information about
Table 2. *Item Mean and Standard Deviation for CoBRAS among Asian Americans*

<table>
<thead>
<tr>
<th>Item</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.91</td>
<td>1.72</td>
</tr>
<tr>
<td>2</td>
<td>2.96</td>
<td>1.23</td>
</tr>
<tr>
<td>3</td>
<td>3.15</td>
<td>1.80</td>
</tr>
<tr>
<td>4</td>
<td>3.24</td>
<td>1.43</td>
</tr>
<tr>
<td>5</td>
<td>3.66</td>
<td>1.67</td>
</tr>
<tr>
<td>6</td>
<td>4.14</td>
<td>1.54</td>
</tr>
<tr>
<td>7</td>
<td>2.23</td>
<td>1.34</td>
</tr>
<tr>
<td>8</td>
<td>2.90</td>
<td>1.35</td>
</tr>
<tr>
<td>9</td>
<td>2.63</td>
<td>1.47</td>
</tr>
<tr>
<td>10</td>
<td>3.09</td>
<td>1.45</td>
</tr>
<tr>
<td>11</td>
<td>2.32</td>
<td>1.22</td>
</tr>
<tr>
<td>12</td>
<td>2.34</td>
<td>1.20</td>
</tr>
<tr>
<td>13</td>
<td>3.53</td>
<td>1.25</td>
</tr>
<tr>
<td>14</td>
<td>3.25</td>
<td>1.78</td>
</tr>
<tr>
<td>15</td>
<td>3.77</td>
<td>1.24</td>
</tr>
<tr>
<td>16</td>
<td>3.32</td>
<td>1.20</td>
</tr>
<tr>
<td>17</td>
<td>1.89</td>
<td>1.23</td>
</tr>
<tr>
<td>18</td>
<td>3.40</td>
<td>1.17</td>
</tr>
<tr>
<td>19</td>
<td>2.07</td>
<td>1.28</td>
</tr>
<tr>
<td>20</td>
<td>3.47</td>
<td>1.43</td>
</tr>
</tbody>
</table>
participants' age, gender, race, ethnicity, generational status, and years spent in the U.S. if not born domestically.

Procedure

I obtained approval from the Institutional Review Board (IRB) to conduct a secondary data analysis. I conducted a literature search of published articles that used the CoBRAS to identify potential studies in which I would be able to obtain datasets with specific focus on recruitment of datasets including Asian American participants. Nine published articles were identified whereupon I contacted the principal investigators from the identified studies by sending a recruitment email introducing the nature of the study and asking for access to their datasets to be included in the secondary analysis. Three researchers responded (Kernahan & Davis, 2010; Spanierman et al., 2008; Tawa & Suyemoto, & Roemer, 2010) and granted access to their datasets.

Data Analysis Plan: Non-parametric LA-LOR DIF Estimate

The present study used the Liu-Agresti estimator of the cumulative common odds ratio (L-A LOR: Liu & Agresti, 1996; Penfield & Algina, 2003, 2006) as implemented in DIFAS 5.0 (Penfield, 2012) to determine whether item bias exists within the CoBRAS. The Liu Agresti cumulative common-log odds ratio (LA-LOR) established by Penfield (2007a) as a generalization of the Mantel-Haenzel common-odds ratio (Mantel & Haenszel, 1959) which has been applied to polytomous items. LA-LOR estimate has the added benefit of assessing the practical application of detecting DIF as is may be applied in situations of small sample size which becomes an important consideration due to the limited sampling of Asian Americans in previous studies utilizing the CoBRAS measure. Additionally, the LA-LOR estimate has been
shown to reduce Type I error along with increased power using MH methods for multiple subgroup comparisons (Penfield, 2001).

The L-A LOR statistic is based on contingency tables and thus analyzes the frequencies with which Asian Americans and Whites chose certain response categories for each item. In the case of two response categories, L-A LOR reduces to the Mantel-Haenszel common odds ratio (Mantel & Haenszel, 1959) for dichotomous items. Thus, LA-LOR can be viewed as a generalization of the Mantel-Haenszel common odds ratio to polytomous items (Penfield & Algina, 2006).

Equation 1. Liu-Agresti Cumulative Common Log-Odds Ratio (L-A LOR)

\[
L - A\ LOR = \frac{\sum_{k=1}^{K} \sum_{j=1}^{j-1} A_{jk} D_{jk} / N_k}{\sum_{k=1}^{K} \sum_{j=1}^{j-1} B_{jk} C_{jk} / N_k}
\]

First, the sample is divided into strata (k in Equation 1) according to the total sum scores of the CoBRAS measure. Second, for each stratum, the response categories are dichotomized. With the six response categories in the CoBRAS, five dichotomizations are created. Let \(N_{Rjk}\) and \(N_{Fjk}\) be the number of responses in each categories for the reference and focal groups respectively, and \(N_k\) be the total number of responses from both group at stratum \(k\). For each dichotomizations, the number of reference group members responding at or below \(j\) \(A_{jk}=N_{R1k}+N_{R2k}+\ldots+N_{Rjk}\) is multiplied with the number of focal group members responding above \(j\) \(D_{jk}=N_{Fk}-C_{jk}\) and the number of reference group members responding above \(j\) \(B_{jk}=N_{Rk}-A_{jk}\) is multiplied with the number of focal group members responding at or below \(j\) \(C_{jk}=N_{F1k}+N_{F2k}+\ldots+N_{Fjk}\). For example, the first dichotomization is the frequency that the reference and focal group members choose the response options are coded 1 \((j=1)\) which is then compared
with the frequencies of response options 2-6 ($j > 1$). In the second dichotomization, the frequency that reference and focal group members choose response options 1 and 2 ($j = 2$) is compared with the frequencies of response options 3-6 ($j > 2$). These frequencies are divided by the number of examinees at stratum $k$ ($N_k$) and summed across the dichotomized response categories and the $k$ strata, and lastly, divided into each other to obtain the L-A LOR ratio.

The subsequent evaluation in determining the extent of DIF was conducted using the classification system developed by Educational Testing Service (ETS; Zieky, 1993). The ETS developed a categorization scheme for the practical application in terms of identification and interpretation of DIF (Zieky, 1993). The specific values vary depending on the specific DIF statistic used. In the case of the study, the categorization system can be applied to the LA-LOR statistic where items are classified into three categories depending on the degree of DIF. The first category, A, is designated for items with negligible DIF (L-A LOR < .43). Category B are for items with moderate DIF (.43 ≤ L-A LOR < .64), and Category C for items with large DIF (L-A LOR ≥ .64).
RESULTS

Results from Non-parametric DIF Analysis

An interitem correlation of the CoBRAS items was conducted on the entire sample as a straightforward measure of internal consistency (see Appendix B). The CoBRAS measure was examined using the Liu-Agresti common log odds ratio (L-A LOR; Liu & Agresti, 1996), a non-parametric Mantel and Haenszel-type estimator. Positive LA-LOR estimate values indicate items favoring the reference group (i.e., Whites) and negative values indicate that the item favored the focal group (i.e., Asian Americans). The extent of DIF was categorized using a coding scheme adopted from the ETS classification system. Under the classification system, DIF items are coded into three categories representative of an increasing degree of DIF from negligible (A), moderate (B), and large (C) levels of DIF. Results from the L-A LOR DIF on the compiled sample comparing Whites and Asian Americans are displayed in Table 3.

In answering the proposed research question of the structural equivalence of the CoBRAS, a DIF analysis identified that Asian Americans’ response patterns differed to Whites among five of its items as compared with Whites. The second research question was to determine the degree of bias among the DIF items, which was answered by using the ETS categorization schema (Zieky, 1993). Four items (Items 10, 14, 18 and 19) were found to exhibit moderate levels of DIF, and the remaining fifth remaining item (Item 5) had large DIF.

The Institutional Discrimination factor contained two items that exhibited DIF. Item 14 indicated that English be the official language which excluding the use of other languages in official settings. Item18 specified racial and ethnic minorities residing in the U.S. as garnering advantages due to skin color. The direction of DIF for item14 and item 18 favored Whites.
The Blatant Racial Issues factor contained three items exhibiting DIF. Two items were classified as exhibiting moderate DIF (B). Item 10 referenced the act of talking about racial issues as causing “unnecessary” tension. Item 19 referenced racial problems as rare, infrequent occurrences. The LA-LOR values indicated that Asian Americans were more likely to endorse items 10 and 19. Item 5 noted racism as being a “major problem” in the U.S., and it was the only item in the analysis classified as exhibiting large DIF (C). The LA-LOR value indicated that Whites were more likely to endorse this item. The reliability of the CoBRAS measure of all 20 items among the Asian American participants was .70. The deletion of Item 5 resulted in a similar reliability ($\alpha = .70$) whereas the deletion of both B and C items had a slight decrease to .69.
Table 3. *Results from LA-LOR Differential Item Functioning Analysis of the CoBRAS along its three subscales: Racial Privilege, Institutional Discrimination and Blatant Racial Issues.*

<table>
<thead>
<tr>
<th>Racial Privilege</th>
<th>L-A LOR</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Everyone who works hard, no matter what race they are, has an equal chance to become rich.</td>
<td>-0.35</td>
<td>A</td>
</tr>
<tr>
<td>12. White people in the US have certain advantages because of the color of their skin</td>
<td>0.10</td>
<td>A</td>
</tr>
<tr>
<td>6. Race is very important in determining who is successful and who is not</td>
<td>0.17</td>
<td>A</td>
</tr>
<tr>
<td>20. Race plays an important role in who gets sent to prison.</td>
<td>0.12</td>
<td>A</td>
</tr>
<tr>
<td>2. Race plays a major role in the type of social services (such as the type of health care or day care) that people receive in the U.S.</td>
<td>0.23</td>
<td>A</td>
</tr>
<tr>
<td>8. Racial and ethnic minorities do not have the same opportunities as White people in the U.S.</td>
<td>-0.06</td>
<td>A</td>
</tr>
<tr>
<td>15. White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities</td>
<td>-0.06</td>
<td>A</td>
</tr>
</tbody>
</table>

**Institutional Discrimination**

<table>
<thead>
<tr>
<th>Institutional Discrimination</th>
<th>L-A LOR</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Social policies, such as affirmative action, discriminate unfairly against White people.</td>
<td>-0.02</td>
<td>A</td>
</tr>
<tr>
<td>9. White people in the U.S. are discriminated against because of the color of their skin.</td>
<td>-0.18</td>
<td>A</td>
</tr>
<tr>
<td>14. English should be the only official language.</td>
<td>0.55</td>
<td>B</td>
</tr>
<tr>
<td>4. Due to racial discrimination, programs such as affirmative action are necessary to help create equality.</td>
<td>0.00</td>
<td>A</td>
</tr>
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<td>Institutional Discrimination</td>
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<td>-----------------------------</td>
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<tr>
<td>18. Racial and ethnic minorities in the U.S. have certain advantages because of the color of their skin.</td>
<td>0.55</td>
<td>B</td>
</tr>
<tr>
<td>3. It is important that people begin to think of themselves as American and not African American, Mexican American or Italian American.</td>
<td>0.41</td>
<td>A</td>
</tr>
<tr>
<td>13. Immigrants should try to fit into the culture and adopt the values of the U.S.</td>
<td>-0.12</td>
<td>A</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Blatant Racial Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Racism is a major problem in the U.S.</td>
</tr>
<tr>
<td>10. Talking about racial issues causes unnecessary tension</td>
</tr>
<tr>
<td>19. Racial problems in the U.S. are rare, isolated situations</td>
</tr>
<tr>
<td>17. It is important for public schools to teach about the history and contributions of racial and ethnic minorities.</td>
</tr>
<tr>
<td>7. Racism may have been a problem in the past, but it is not an important problem today.</td>
</tr>
<tr>
<td>11. It is important for political leaders to talk about racism to help work through or solve society's problems.</td>
</tr>
</tbody>
</table>

A < .43 (negligible); .43 - .63 B (moderate); .64 > C (large)
DISCUSSION

The current investigation examined potential item bias within the CoBRAS measure, a widely used instrument measuring color-blind racial beliefs. A DIF analysis utilizing the LA-LOR DIF estimate examined the structural equivalence of the CoBRAS measure when administered to Asian Americans compared with Whites. Identified items exhibiting DIF were categorized using the ETS classification scheme according to the degree in which DIF was present. Five items were identified as having moderate (B) to large (C) DIF along two of the three factors (Institutional Discrimination and Blatant Racial Issues). The Racial Privilege factor was the only factor where all of its composite items exhibited negligible DIF (A). The findings of the DIF analysis are consistent with the hypothesized outcome in that color-blind racial attitudes would manifest differently for Asian Americans as compared with Whites. The following sections provide potential explanations of what other constructs are being introduced.

Along the Institutional Discrimination dimension, two items were identified as exhibiting moderate DIF (B). The first of the two items was Item 14, “English should be the only official language.” The direction of the LA-LOR DIF estimate indicated that Whites were more likely to endorse the item. According to the initial scale construction study, the item pertaining to English being the only official language was meant to capture the notion of the U.S. being culturally monolithic. Although DIF alone cannot provide an explanation as to the observed differential response patterns, a possible explanation may be that Asian Americans responding to the item may have an added interpretation of language fluency. It is well-documented that Asian Americans are routinely confronted with statements regarding their English skills (e.g., “You speak English so well”) which has been identified as a microaggressive acts for Asian Americans (Sue, Bucceri, Lin, Nadal, & Torino, 2009). As an extension, Asian Americans contend with
aspects of their claim on being American. Being viewed by others as the “Perpetual Foreigner” is a phenomenon unique to Asian Americans where it is not uncommon for Asian Americans to be given compliments regarding their mastery of the English language even though they may be second or third generation Americans. As the *Perpetual Foreigner* label suggests, Asian Americans are routinely considered newly arrived emigrants encompassing the belief that they are unassimilable by holding on to their own customs and cultural practice (Sue et al., 2007; Tuan, 1998). In a study by Devos and Banaji (2005), Asian Americans were rated as being the least “American” in comparison with White Americans and African Americans. Mok (1998) provided additional insights that Asian Americans internalize messages that they themselves are not “real Americans” as they do not fit the pre-conceived mold of blond hair, blue eyes. The aforementioned factors may play a role in explaining the observed DIF.

The second item identified as exhibiting DIF under the Institutional Discriminations factor was Item 18, “Racial and ethnic minorities in the U.S. have certain advantages because of the color of their skin.” The direction of the LA-LOR estimate showed the item as favoring Whites. In offering a possible explanation for the occurrence of DIF, the term “Racial and ethnic minorities” may introduce a level of unintended ambiguity as other items within the measure included specific comparison to Whites when addressing racial and ethnic minorities. It is important to note that Asian Americans are given the dubious honor of being labeled the *Model Minority* portraying Asian Americans as more successful than other minorities, and at times, achieving greater levels of success than their White counterparts (Lee, Wong & Alvarez, 2008; Wong & Halgin, 2006). Though the item initially was constructed to capture aspects of reverse discrimination, respondents espousing this perspective may view Asian Americans as “Honorary Whites” (Tuan, 1999) and make their comparisons amongst other racial and ethnic minorities.
A possible alternative explanation for the occurrence of DIF may be attributed to the term “color of their skin.” Certainly, there exists a bias against individuals with darker skin color as they face greater levels of discrimination resulting in increased difficulties accessing social services as well as economic and educational opportunities (Hunter, 2007). However, separate from the racial hierarchy advantaging Whites over racial minorities is the concept of colorism. A tenet of colorism is the notion of striving for lighter skin complexion as the ideal beauty standard. An embedded hierarchical structure exists in the Asian American community (especially among women) in which there is a strong preference towards lighter skin as these individuals are associated with greater beauty along with high social standing (Rondilla & Spickard, 2007). A well-known Chinese saying, “One white covers up three ugliness” exemplifies the prioritization of Whiteness in which this one attribute supersedes other relative beauty “deficits.” Some Asian Americans in pursuit of the White ideal may engage in behaviors such as shielding themselves from the sun through articles of clothing, cosmetic products and even to the extreme of engaging in skin bleaching (Rondilla & Spickard, 2007).

The three remaining items identified as exhibiting DIF fell within the Blatant Racial Issues factor. Asian Americans were less likely to endorse Item 5, “Racism is a major problem” compared to Whites in the samples. Interestingly, this was the only item in the scale that exhibited large DIF (C). Conversely, Asian Americans were more likely to endorse the other two DIF items, Item 10, “Talking about racial issues causes unnecessary tension” and Item 19, “Racial problems in the U.S. are rare, isolated situations” which demonstrated moderate DIF (B). The direction of DIF for the three items consistently indicated that Asian American respondents were more likely to minimize the occurrence of racism and less likely to acknowledge the impact resultant from racist events. Taken at face value, it appears that the Asian American respondents...
were more likely than Whites to endorse statements supporting color-blind racial beliefs. However, an alternative explanation for the observed differences may be attributed to Asian Americans adopting an adaptive coping strategy in their response to statements addressing racist events. Asian Americans using a coping mechanism in response to acts of racism provides a framework to which individuals may manage both the internal and external stressors associated with the particular event deemed as threatening (Lazarus & Folkman, 1984).

Researchers contend that individuals’ responses to racist events vary depending on the specific coping style employed (Tobin, Holroyd, Reynolds, & Wigal, 1989). Miller and Kaiser (2001) identified two coping schemas categorized as engagement and disengagement. Engagement is an approach-style coping strategy in which individuals deal with perceived stressful situations (i.e., acts of racism) by directly confronting the situation. Alternatively, the disengagement style is an avoidant-style coping strategy where individuals avoid, withdraw, deny or minimize the situation. A study by Kuo (1995) specifically investigated the coping styles of Asian Americans in responding to incidences of racial discrimination, which were aligned with the avoidant-style. Participants reported employing cognitive strategies to reconceptualize the perceived racist event in order to mitigate or ignore the potential negative psychological impact on the individual. Additionally, when asked about how they responded to past acts of discrimination, the majority of respondents endorsed statements that “racial discrimination was not really important” also indicating that they “tried to ignore discrimination” (p.119). A study by Leets and Giles (1997) found that Asian Americans respondents rated anti-Asian hate speech as less harmful when compared to the ratings of the same anti-Asian statements by their White counterparts. A subsequent study by Leets, Giles and Noels (1999) replicated the findings in that Asian Americans rated direct racist statements targeting Asian
Americans less negatively than White respondents, though indirect statements were rated similarly. These studies highlight how Asian Americans employ avoidant-style coping strategies either to minimize the negative psychological effects that perceived discrimination may have on them.

In offering an alternative explanation to the observed differences in how Asian Americans respond to items 5, 10 and 19, it challenges the implicit assumption of the CoBRAS that, apart from their endorsement of color-blind beliefs, participants will respond in a similar fashion to direct racist statements. However as previous studies have shown, Asian Americans on average employ avoidant coping strategies that allow individuals to withdraw or avoid situations perceived as stressful (e.g., racist acts) in order to minimize potentially negative psychological consequences. In factoring cultural considerations, Asian Americans exhibit avoidant coping strategies which may inadvertently maintain the status quo. The emphasis on interpersonal relationships and the practice of preserving harmony with others even at the expense of oneself can be construed as being congruent with collectivistic values (Heppner, Heppner, Lee, Wang, Park & Wang, 2006). Heppner and his colleagues (2006) noted several Asian-specific values that may be employed in coping to stressful and traumatic events (e.g., experiences of racism). An Asian-specific value identified was Acceptance, Reframing and Striving which encourages individuals to accept the trauma or accommodate to existing realities, reframe the meaning of the trauma, and defer from expressing negative feelings to others. Another Asian-specific value described was Avoidance and Detachment which promoted the individual’s ability to detach themselves and avoid thinking about the trauma for a period of time.

The findings of the present study serve to extend our understanding of color-blind racial attitudes as it relates specifically to Asian Americans. The identification of DIF within the
Institutional Discrimination and Blatant Racial Issues factors do not automatically indicate bias, though the implications of the findings challenges us to reconsider how CBRI manifests for Asian Americans. In interpreting the DIF-prone items, an explanation may be due to group differences in how Asian Americans interpret these items. Consistent with the CBRI literature, the findings are consistent in that CBRI manifests differently for people of color (Speight et al., 2015). In the case of Asian Americans, it becomes necessary to recognize the role that the MMS and other stereotypical portrayals play in intergroup relations and self-perceptions. An alternative explanation of the observed DIF could simply be attributed to the ambiguity of the wording of the items. In either case, the study provides additional psychometric information that the CoBRAS operates differently for Asian Americans as compared with Whites.

**Practical Implications and Considerations**

The findings of the current study identified several items of the CoBRAS that demonstrated DIF. Specifically, two items were identified within the Institutional Discrimination subscale as exhibiting moderate DIF and three items were identified within the Blatant Racial Issues subscale as exhibiting moderate and large DIF. At times, researchers have opted to use a single subscale for purposes of their study. For instance, Lee and colleagues (2006) adapted the Blatant Racial Issues subscale to measure racial attitudes of parents of transracial adoptees. The adaptation proved useful in their efforts to measure the construct where no measure existed previously. In situations where researchers want to measure a specific dimension of CBRI with Asian American participants, it is advised to use the Racial Privilege subscale as this factor exhibited negligible DIF demonstrating that all of its items operated similarly for Asian Americans as compared to Whites. Discretion is warranted in studies that have opted to interpret the Institutional Discrimination and Blatant Racial Issues subscales scores with Asian American
as multiple items in these subscales exhibited item bias. Eliminating items solely based on the DIF cannot be recommended since they may not contain bias; this may compromise the integrity of the rest of the scale (Schmitt, Holland, Dorans, 1993). Smith (2002) advocated for retaining DIF-prone items in situations where the items provide useful information about the construct under investigation. She argued that whenever possible researchers should not delete items merely to simplify measurement. As such, it is recommend that researchers administering the CoBRAS to Asian American participants are advised to interpret the full scale score of the measure.

It is important to note that the current study excluded Asian international as well as first generation Asian students from the analysis. The decision to delineate Asian Americans from the more recently arrived Asian population was based on the recognition of the inherent cultural differences between these international and the domestic groups such as differences in acculturation (Kim, 2008) and responses to perceived discrimination (Heppner et al., 2006). Researchers should be mindful of interpreting the CoBRAS when administered to Asian international population and first generation Asian emigrants as the psychometric properties has not been validated for use with these groups.

**Study Limitations and Future Directions**

A limitation of the study was the total sample size as the number of published studies utilizing the CoBRAS was reduced by the condition of being administered to Asian Americans. The sample size also limited the available analytical tools to choose from and prevented an additional DIF analysis from being conducted to determine the level of convergence based on the results from the two competing DIF analyses. Competing statistical procedures may generate differing results given the differences in the set of assumptions made as well as approaches in the
data analysis (Hambleton, 2000). The overlap in identified DIF items would provide greater confidence in the results. An additional DIF procedure could implement the Poly-SIBTEST procedure which has proven to be an effective method for detecting DIF in polytomous items in accounting for the impact-induced Type I errors (Chang, Mazzeo, Roussos, 1996).

Though not necessarily a required condition, an additional consideration is that the current dataset does not include representation from the West Coast (i.e., California). It may provide greater confidence in the DIF results if it were replicated upon the inclusion of participants representing that region to increase the geographical diversity given that the largest representative numbers of Asian Americans reside in California (U.S. Census Bureau, 2013). The resultant identified DIF items may be due sampling bias given that the analysis was a secondary analysis from pre-existing datasets in which the findings may not be replicated in another dataset.

The study conducted a statistical test of DIF within the CoBRAS in combination with a substantive explanation which serves as strong evidence that item bias exists (Roussos & Stout, 1996). The identified items exhibiting moderate and large DIF may benefit from further analyses to determine possible explanations of the observed differences. Van de Vijver and Tanzer (2004) noted several possible sources of bias that contribute to DIF. The first source of bias is identified as ambiguously worded items in which the wording of the item may carry a level of uncertainty in the intended meaning. The second source is the introduction of nuisance factors that pertain to items that may assess additional traits or abilities than the intended construct. Lastly, culturally specific sources of bias are due to additional inferences or connotations in the meaning of the item content that differ than what was initially intended.
Evaluation of the specified items exhibiting DIF can provide additional insight contributing to our understanding of the latent construct (i.e., CBRI) in consideration of how it manifests for Asian Americans. Such a process would involve careful examination of the items with DIF by a panel of experts to determine the appropriate course of action. Those possible explanations deemed most reasonable can then be developed into hypotheses to be tested leading to the decision to delete, retain or the addition of items (Schmitt, Holland, Dorans, 1993). The findings of the current study may lead to the development of a more sensitive instrument, and future research should pay attention to these specific cultural considerations of CBRI and its endorsement by racial and ethnic minorities.

Conclusion

The initial scale construction and subsequent studies utilizing the CoBRAS measure provided initial psychometric information of the widely used instrument measuring color-blind racial attitudes. Since DIF analyses are not routinely applied to psychological measures, the current study can serve as an illustration of its effective application to ensure equivalent functioning of the measure as administered to Asian Americans. Considering the pervasiveness and influential impact of CBRI, establishing the psychometric properties of the CoBRAS for use among Asian Americans serves as a pivotal step in contributing to future studies using the instrument. The current study provides suggestions in regards to the application and interpretation of scores when making comparisons across group comparisons. Further research is recommended to better to ascertain and eliminate of the sources of the identified DIF. The goal of the study was not to refine and develop a new CoBRAS measure, rather to investigate the possibility of item bias and draw conclusions about the extent of item bias, if any, was present in the existing measure.
REFERENCES


Implications for improved education and training in psychology. *Training and Education in Professional Psychology, 3*(2), 94.


Shealy, R., & Stout, W. (1993). A model-based standardization approach that separates true Bias/DIF from group ability differences and detects test Bias/DTF as well as item Bias/DIF. *Psychometrika, 58*(2), 159-94.


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**APPENDIX A: COLOR-BLIND RACIAL ATTITUDES SCALE**

**Directions:** Below is a set of questions that deal with social issues in the United States (U.S.). Using the 6-point scale below, please give your honest rating about the degree to which you personally agree or disagree with each statement. Please be as open and honest as you can; there are no right or wrong answers.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Moderately Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Moderately Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. Everyone who works hard, no matter what race they are, has an equal chance to become rich.

2. Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.

3. It is important that people begin to think of themselves as American and not African American, Mexican American or Italian American.

4. Due to racial discrimination, programs such as affirmative action are necessary to help create equality.

5. Racism is a major problem in the U.S.

6. Race is very important in determining who is
English should be the only official language in the U.S.

White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities.

Racism may have been a problem in the past, but it is not an important problem today.

Racial and ethnic minorities do not have the same opportunities as White people in the U.S.

White people in the U.S. are discriminated against because of the color of their skin.

Talking about racial issues causes unnecessary tension.

It is important for political leaders to talk about racism to help work through or solve society’s problems.

White people in the U.S. have certain advantages because of the color of their skin.

Immigrants should try to fit into the culture and adopt the values of the U.S.

English should be the only official language in the U.S.

White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities.
<table>
<thead>
<tr>
<th>Number</th>
<th>Statement</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>Social policies, such as affirmative action, discriminate unfairly against White people.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>17.</td>
<td>It is important for public schools to teach about the history and contributions of racial and ethnic minorities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>18.</td>
<td>Racial and ethnic minorities in the U.S. have certain advantages because of the color of their skin.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>19.</td>
<td>Racial problems in the U.S. are rare, isolated situations.</td>
<td>1</td>
<td>2</td>
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<td>5</td>
<td>6</td>
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<tr>
<td>20.</td>
<td>Race plays an important role in who gets sent to prison.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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</table>
### APPENDIX B: CORRELATION MATRIX OF COBRAS ITEMS AMONG THE TOTAL SAMPLE

<table>
<thead>
<tr>
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<th>7</th>
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