

Racial Discrimination, Racial Identity, and Impostor Phenomenon: A Profile Approach

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Objectives: This study examined the association between racial discrimination and the impostor phenomenon (IP) and the moderating influence of racial identity on this relationship. **Method:** One hundred fifty-seven African American college students (68% female; mean age = 18.63) completed measures of racial discrimination, racial identity, and IP during 2 waves of data collection. **Results:** Utilizing latent profile analyses, 4 patterns of racial identity were identified: Undifferentiated, Multiculturalist, Race-Focused, and Humanist. Racial discrimination predicted higher subsequent levels of IP. Racial identity did not moderate the impact of racial discrimination; however, students in the Multiculturalist and Humanist groups reported the lowest and highest levels of IP at Wave 2, respectively. **Conclusion:** IP is influenced by racial discrimination experiences as well as by the significance and meaning that individuals ascribe to being African American.

Keywords: impostor phenomenon, racial discrimination, racial identity, African Americans

Racial discrimination is a ubiquitous and psychologically damaging experience that may shape how African American young adults view themselves (Cogburn, Chavous, & Griffin, 2011; Kogan, Yu, Allen, & Brody, 2015; Neblett, Bernard, & Banks, 2016; Priest et al., 2013). One potential negative outcome of racial discrimination is the impostor phenomenon (IP), or feelings of intellectual incompetence (Clance & Imes, 1978). Recent scholarship suggests that IP is a relevant experience for many high-achieving African American young adults (McClain et al., 2016; Peteet, Brown, Lige, & Lanaway, 2015) that may result from racial discrimination and other forms of race-related stress (Bernard, Lige, Willis, Sosoo, & Neblett, 2017; Cokley, McClain, Enciso, & Martinez, 2013).

Fortunately, not all African American students who experience racial discrimination report IP. Racial identity, defined as the significance and meaning that individuals ascribe to their race (Sellers, Smith, Shelton, Rowley, & Chavous, 1998), may be an important factor to consider in understanding the differential impact of racial discrimination on feelings of IP. Theory and empirical research suggest that racial identity may bolster self-esteem and lead to the development of coping responses that protect against experiences of racial discrimination (Neblett & Carter, 2012; Neblett, Rivas-Drake, & Umaña-Taylor, 2012; Rowley, Sellers, Chavous, & Smith, 1998), yet few, if any, studies have

examined racial identity as a moderating influence on the link between racial discrimination and IP. Thus, the current study represents a longitudinal investigation of the associations among racial discrimination, racial identity, and IP in a sample of African American, young-adult college students.

Theoretical Framework

The risk and resilience framework (Rutter, 1987) is a useful approach to conceptualize the associations among racial discrimination, racial identity, and IP. This framework recognizes the effects of unique protective factors such as racial identity that may counteract or mitigate aversive responses (e.g., IP) to a risk factor (e.g., racial discrimination). Within this framework, two specific models—the compensatory model and the protective factor model—have been utilized to elucidate the negative impact of racial discrimination (e.g., Neblett et al., 2008; Sellers, Copeland-Linder, Martin, & Lewis, 2006). The compensatory model highlights resilience factors that are related to more positive outcomes in the face of risk (Zimmerman, Bingenheimer, & Notaro, 2002). Possessing a particular resilience factor is said to positively compensate for the negative impact of a specific risk factor. The protective model highlights resilience factors that may serve to buffer the aversive effects of risk factors on a particular outcome (Zimmerman et al., 2002). Possessing a higher level of a particular resilience factor is proposed to attenuate the relationship between the risk factor and the negative outcome in comparison to an individual who possesses lower levels of the resilience factor. Thus, the relationship between the risk factor and the negative outcome is weaker for individuals who possess higher levels of the resilience factor than those who possess lower levels of the resilience factor. In contrast to protective factors, risk and resilience models also consider vulnerability factors, or factors that exacerbate or amplify the link between risk factors and negative outcomes. In this study, we examine racial identity as a potential protective or vulnerability

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factor in the context of racial discrimination and subsequent feelings of IP.

Impostor Phenomenon

Feelings of IP, a possible consequence of racial discrimination, have been theorized to capture self-perceptions of intellectual incompetence and the inability to internalize success among high-achieving individuals (Clance & Imes, 1978). People experiencing high levels of IP often attribute their achievements to external factors (e.g., good social contacts, luck) rather than internal abilities. Regardless of accomplishments, advanced degrees, or professional status, individuals high in IP believe that they have deceived others regarding their intellect and constantly fear others discovering their perceived lack of ability (Clance & Imes, 1978).

Since its inception, IP has been linked to numerous adverse psychological outcomes, including anxiety (Clance & Imes, 1978), depressive symptoms (McGregor, Gee, & Posey, 2008), low self-esteem (Sonnak & Towell, 2001), and self-doubt (Gibson-Beverly & Schwartz, 2008; Ross & Krukowski, 2003). Although studies of IP in African American populations are limited, the literature includes a handful of studies specifically examining IP among African American students attending predominantly White institutions (PWIs). For example, Ewing, Richardson, James-Myers, and Russell (1996) found academic self-concept to be a significant inverse predictor of IP among African American graduate students attending a PWI. In addition, Austin, Clark, Ross, and Taylor (2009) found that IP partially mediated the association between survivor guilt and depression in a sample of African American college students attending a PWI. More recently, Peteet, Montgomery, and Weekes (2015) found that IP positively predicted psychological distress and was inversely related to self-esteem among African American students attending a PWI. Although relatively sparse, these and other related studies (e.g., Lige, Peteet, & Brown 2016; McClain et al., 2016) indicate that IP is a pertinent and psychologically harmful experience among African American college students.

Racial Discrimination and IP

Racial discrimination has been defined in a multitude of ways (see Berman & Paradies, 2010; Blank, Dabady, & Citro, 2004; Bonilla-Silva, 1997; Clark, Anderson, Clark, & Williams, 1999); however, most definitions characterize it as the interpersonal, behavioral extension of attitudes or beliefs that suggest one group is superior to another on the basis of racial characteristics or features (Harrell, 1999; Jones, 1997). The deleterious effects of discrimination have been well documented, with several studies linking such experiences to a host of unfavorable psychological adjustment outcomes such as low self-esteem (Seaton, Caldwell, Sellers, & Jackson, 2010; Seaton, 2009), feelings of anxiety (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003), and depressive symptoms (Seaton & Yip, 2009), but few studies have examined IP as an outcome.

Scholars postulate that racially driven experiences (e.g., racial discrimination; token status) may also give rise to feelings of IP by evoking a sense of “otherness,” which may perpetuate feelings of intellectual incompetence (Lige et al., 2016; Peteet et al., 2015). In support of this hypothesis, Cokley et al. (2013) and McClain et al.

(2016) found that minority status stress—an amalgamation of unique race-related stressors such as racial discrimination, insensitive or marginalizing comments, and fears of not belonging—was positively correlated with IP in a sample of 240 self-identified racial minority college students and in a sample of 218 African American college students, respectively. Relatedly, through multigroup path analyses, Cokley et al. (2017) found that perceived discrimination had a stronger impact on feelings of IP among African American and Latino/a-American students in comparison to their Asian-American peers. Burgeoning research also provides evidence that a link between racial discrimination and IP may exist over time. For example, Bernard and colleagues (2017) found a significant positive association between IP and depressive symptoms and interpersonal sensitivity, particularly among African American young women endorsing higher instances of racial discrimination. Taken together, these results suggest that IP and racial discrimination are interrelated.

Racial Identity as a Moderating Influence

Consistent with the risk and resilience framework, racial identity has been highlighted as a specific resilience factor that may operate to influence the association between racial discrimination and psychological adjustment (e.g., Bynum, Best, Barnes, & Burton, 2008; Hoggard, Byrd, & Sellers, 2015; Neblett, Shelton, & Sellers, 2004; Sellers et al., 2003, 2006). Among African American college students, Neblett et al. (2004) found that high levels of racial centrality acted as a buffer of psychological distress in the face of discrimination. Sellers et al. (2006) reported that possessing positive attitudes toward other African Americans operated as a compensatory factor with respect to adolescent endorsements of depressive symptoms, perceived stress, and psychological well-being whereas possessing beliefs that other groups viewed African Americans less positively operated as a protective factor that buffered the relationship between racial discrimination and these outcomes. Given that these protective dimensions of racial identity are associated with positive self-concept and increased self-esteem (Rowley et al., 1998), one might imagine that racial identity could bolster self-concept and attenuate feelings of intellectual incompetence.

Alternatively, racial identity could act as a vulnerability factor in the face of discrimination. Individuals high in racial centrality might be more likely to perceive racial discrimination in more ambiguous situations (Operario & Fiske, 2001; Sellers & Shelton, 2003) and report increased psychological distress (McCoy & Major, 2003) as a result of increased perceptions of discrimination. Individuals possessing attitudes that devalue or deemphasize being African American might be more vulnerable to negative adjustment in the context of racial discrimination (Carter & Reynolds, 2011), especially if their attempts to connect with White peers are met with discrimination.

In this study, we conceptualize racial identity using the Multidimensional Model of Racial Identity (MMRI; Sellers et al., 1998). A strength of this model is its conceptualization of racial identity as a multidimensional construct consisting of distinct yet conceptually related dimensions. According to Sellers and colleagues, *racial identity* refers to the significance and meaning that African Americans ascribe to their race and is comprised of four dimensions: salience (not included in current study because it reflects the

relevance of race at a particular moment), centrality, regard, and ideology. *Racial centrality* refers to the degree to which individuals define themselves with regard to race. *Racial regard* comprises two unique components: private regard (perceptions of African Americans and membership in that group) and public regard (how favorably one feels that others view African Americans). *Racial ideology* refers to an individual's personal beliefs, opinions, and attitudes about how African Americans should interact with the broader society and includes assimilationist (emphasis on similarities between African American experiences and the broader American experience), humanist (emphasis on similarities between African Americans and the human race), oppressed minority (emphasis on similarities with other oppressed groups), and nationalist (emphasis on the uniqueness of the African American experience) ideologies.

Limitations of the Literature

Several shortcomings limit our understanding of the links among racial discrimination, racial identity, and IP. First, empirical literature has largely utilized a variable-centered approach that focuses on the independent role of specific dimensions of racial identity. However, such an approach does not capitalize on the simultaneous ways in which people can combine these various dimensions of identity; therefore, it may represent a mismatch between how racial identity is theoretically conceptualized and how it is empirically examined. One analytic technique to capture the multidimensional nature of racial identity is through the use of latent profile analysis, which is more fitting for conceptualizations of identity. Recent studies have utilized a profile approach to elucidate the unique effect of different combinations of racial identity dimensions on various outcomes (Chavous et al., 2003; Seaton, 2009; Seaton, Yip, Morgan-Lopez, & Sellers, 2012). Although useful in documenting the importance of racial identity, these studies have primarily focused on the centrality and regard scales (e.g., Chavous et al., 2003; Seaton, 2009) or the ideology subscales (Rowley, Chavous, & Cooke, 2003), making it difficult to determine the ways in which multiple dimensions of racial identity interact with others, with racial discrimination, and with subsequent mental health. To date, only one published study has simultaneously examined all seven dimensions of racial identity (Banks & Kohn-Wood, 2007). The absence of a more complete picture of racial identity suggests that more work is needed to shed light on how all dimensions of racial identity interact and impact the link between racial discrimination and mental health.

Second, although studies have examined the association between race-related stress and IP (Bernard et al., 2017; Cokley et al., 2013, 2017), few studies have examined how racial identity may influence this relationship. As discussed previously, racial identity has been empirically shown to operate as both a protective and vulnerability factor in the context of race-related stress. Accordingly, it is possible that racial identity may operate similarly when considered in the context of IP. That is, racial identity may serve to attenuate or exacerbate the association between racial discrimination and IP. Although current scholarship examining racial identity in relation to IP has not found any direct relationship between the two constructs (Ewing et al., 1996; Lige et al., 2016), this body of work has not used a multidimensional approach to examine racial identity.

Finally, the work examining racial identity, racial discrimination, and IP has largely been cross-sectional, making it difficult to address the temporal order between experiences with racial discrimination and negative mental health outcomes (Brown et al., 2000). To address this limitation, the current study utilizes a longitudinal design. A longitudinal approach provides scholars opportunities to explore how discrimination may impact African American youth over time (Brody et al., 2014). Furthermore, racial identity may influence the nature of the association between racial discrimination and subsequent changes in IP.

Current Study

This study aimed to increase understanding of the associations among racial discrimination, racial identity, and IP among African American young adults using two waves of data. Our first aim was to longitudinally examine the relationship between racial discrimination and IP. In line with recent research, we hypothesized that racial discrimination would be positively associated with subsequent IP, controlling for initial levels of IP. The second aim of the study was to examine the moderating role that patterns of racial identity may have in the relationship between racial discrimination and IP over time. We predicted that the relationship between initial racial discrimination and subsequent levels of IP would be exacerbated or attenuated by certain combinations of identity over time. Consistent with prior work (Chavous et al., 2003; Seaton, 2009), we posited that a profile characterized by high reports of racial centrality, high reports of private regard, and low reports of public regard would attenuate the deleterious effects of racial discrimination on IP. However, we expected racial identity profiles including high humanist or assimilationist ideology to exacerbate the impact of racial discrimination on IP (Banks & Kohn-Wood, 2007).

Method

Data were collected as part of an ongoing longitudinal research project on African American health and life experiences. Two waves of data were used, with a semester interval of approximately 8 months between each wave. Data were collected from two successive cohorts of first-year students beginning in the fall of 2013.

Participants

Participants were African American first-year students at a midsize, public, southeastern, predominantly White university in the United States who were recruited from a list of incoming first-year students provided by the university registrar. To be eligible to participate, students had to be a college student at the university where the study was conducted, be at least 18 years of age, and self-identify as African American. The sample consisted of 157 students: 107 females (68.2%) and 50 males (31.8%). Two groups were represented: Cohort 1 ($N = 84$; 53.5%) with an average age of 19.12 years ($SD = 0.45$; age range = 18–21) and Cohort 2 ($N = 73$; 46.50%), with an average age of 18.07 years ($SD = 0.25$; age range = 18–19) at Wave 1. Cohort 1 consisted of 57 females (67.9%) and 27 males (32.1%) whereas Cohort 2 consisted of 50 females (68.5%) and 23 males (31.5%). Cohort 1

was slightly older than Cohort 2 ($p < .001$) and had lower levels of oppressed minority ideology ($M = 4.81$) as compared with Cohort 2 ($M = 5.22$), $p = .019$, but the cohorts did not differ with respect to any of the other racial identity variables, maternal educational attainment, gender composition, or IP at either wave. Sample attrition was 8.67% across both waves. Students who participated in both Waves 1 and 2 did not differ in gender composition, age, racial discrimination experiences, racial identity, or reports of IP from those who dropped out after Wave 1.

The median highest maternal educational attainment was “Bachelors or 4-year college degree,” and representation of self-reported family socioeconomic status (SES) included 7.6% poor, 19.7% working class, 51.0% middle class, 21.0% upper middle, and 0.6% wealthy. Approximately 80% of students were in-state students, 91.7% were born in the United States, 29.9% were first-generation college students, and 68% described their family structure as “two parents.” Self-reported cumulative average was 2.81 ($SD = 0.51$). Family SES, first-generation student status, and family structure were similar between cohorts.

Procedure

Upon receiving university institutional review board approval, students were contacted via email and asked to participate in a longitudinal study examining the impact of stressful life experiences on mental and physical health in African American college students. Participants completed a battery of questionnaires in survey administrations lasting approximately 1 h. Participants were asked to return the following semester for a second wave of data collection in which the same battery of questionnaires was completed. African American research assistants administered the questionnaires via Qualtrics Online Survey Software in a university classroom at each time point. Participants received payment of \$15 at each wave of data collection.

Measures

Demographic information. Participants reported demographic data, which were used as covariates in the analysis. This information consisted of gender, age, race/ethnicity, SES, and mothers' highest level of educational attainment (1 = *elementary school* to 7 = *graduate or professional degree*). Empirical work suggests that parental educational attainment may be a more accurate measure of SES (Almeida, Neupert, Banks, & Serido, 2005; Grzywacz, Almeida, Neupert, & Ettner, 2004). As such, parental educational attainment was utilized as a proxy for SES.

Racial discrimination. College students' racial discrimination experiences during the past year (and since the first wave of data collection at Time 2) were assessed at Time 1 and Time 2 utilizing the Daily Life Experiences (DLE) scale (Harrell, 1994). However, the Time 1 measure was used as the primary measure of racial discrimination to model the effects of prior discrimination on subsequent IP. The DLE is a subscale of Harrell's (1994) Racism and Life Experiences Scale. As a whole, this self-report scale is used to assess past experiences with racial discrimination. The DLE subscale (Wave 1 $\alpha = .94$) assesses the frequency and extent to which individuals have experienced 18 independent microaggressions as a result of their race in the past year. Responses on the DLE are rated from 0 (*never*) to 5 (*once a week or*

more), with higher scores corresponding to higher levels of experiences with racial discrimination. The DLE scale has been correlated with other indices of mental health such as indicators of psychological adjustment (e.g., Neblett et al., 2016; Sellers et al., 2006). In addition, the DLE has been shown to possess reliable and valid psychometric properties (e.g., Lee, Neblett, & Jackson, 2015; Seaton, Neblett, Upton, Hammond, & Sellers, 2011).

Racial identity. To assess the aforementioned dimensions of racial identity, the short form of the Multidimensional Inventory of Black Identity (MIBI-S) was utilized (Martin, Wout, Nguyen, Sellers, & Gonzalez, 2010). Several studies have utilized the MIBI-S in their investigations of latent profile analyses (Banks & Kohn-Wood, 2007; Seaton, 2009). Responses to the MIBI-S are rated from 1 (*strongly disagree*) to 7 (*strongly agree*), with responses assessing the three stable dimensions of racial identity: Centrality, Regard, and Ideology. For racial identity, participants' scores at Time 1 on the MIBI-S measure were used as the primary index of racial identity in the study because we wished to evaluate how initial levels of racial identity would attenuate or exacerbate the subsequent consequences of prior racial discrimination experiences on impostor feelings. The Centrality subscale has four items (Time 1: $\alpha = .67$). Higher scores on the Centrality subscale are indicative of greater endorsements that race is more central to the respondent's identity (e.g., “In general, being Black is important to my self-image”). The Regard scale is composed of two subscales assessing Private Regard and Public Regard, respectively. The Private Regard subscale has three items (Time 1: $\alpha = .85$). A higher score on the Private Regard subscale indicates that individuals hold more positive attitudes about being African American (e.g., “I feel good about Black people”). The Public Regard subscale has four items (Time 1: $\alpha = .85$). Higher scores on the Public Regard subscale indicate that individuals believe that other groups hold more positive attitudes toward African Americans (e.g., “Overall, Blacks are considered good by others”). Racial Ideology has four separate subscales that capture the aforementioned unique patterns of attitudes related to how African Americans should interact with the broader society. The Assimilationist subscale has four items (Time 1: $\alpha = .73$). Higher scores on the Assimilationist subscale indicate that individuals emphasize the similarities between African Americans and mainstream America (e.g., “Blacks should strive to be full members of the American political system”). The Humanist subscale has four items (Time 1: $\alpha = .62$). Higher scores on the Humanist subscale indicate that individuals emphasize the similarities among individuals of all races (e.g., “Blacks should judge Whites as individuals and not as members of the White race”). The Oppressed Minority subscale has four items (Time 1: $\alpha = .74$). Higher scores on the Oppressed Minority subscale correspond with a greater emphasis of the similarities between African Americans and other minority groups (e.g., “The racism Blacks have experienced is similar to that of other minority groups”). Lastly, the Nationalist subscale has four items (Time 1: $\alpha = .66$). Higher scores on the Nationalist subscale indicate that individuals emphasize the uniqueness of being African American (e.g., “Whenever possible, Blacks should buy from other Black businesses”). Previous studies utilizing factor and regression analyses have illustrated construct validity for the MIBI-S in large African American college samples (Banks & Kohn-Wood, 2007; Jones, Peddie, Gilrane, King, & Gray, 2016; Seaton, 2009; Sellers, Rowley, Chavous, Shelton, & Smith, 1997).

IP. Clance's Impostor Scale (CIPS; Clance & Imes, 1978) is a 20-item self-report measure that assesses the extent to which individuals experience impostor feelings or worries (Time 1: $\alpha = .93$; Time 2: $\alpha = .93$). Responses on the CIPS are rated from 1 (*not at all true*) to 5 (*very true*), with higher scores reflecting more intense impostor feelings. Sample items from the CIPS include "At times, I feel my success was due to some kind of luck" and "I often compare my ability to those around me and think they may be more intelligent than I am." With respect to its validity, psychometric investigations of the CIPS document the scale to possess satisfactory internal consistency, in addition to concurrent and discriminant validity within college student samples (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; French, Ullrich-French, & Follman, 2008). To date, we are unaware of any scholarship explicitly examining the psychometric properties of the CIPS within African American samples. However, recent studies utilizing the CIPS with African American college students have provided evidence to suggest that this scale may produce reliable scores of IP within this sample (e.g., Austin et al., 2009; Lige et al., 2016). For instance, both Bernard et al. (2017) and McClain et al. (2016) reported the CIPS to be a reliable measure of IP; they reported Cronbach's α s of .93 and .91 within a sample of 157 and 218 African American college students, respectively. Bernard et al. also reported significant positive correlations between IP and racial discrimination as well as anxiety, depressive symptoms, and interpersonal sensitivity, which supports the concurrent validity of the scale.

Results

Preliminary Analysis

Descriptive statistics (i.e., correlations, means and standard deviations) for the key study variables are summarized in Table 1. We assessed continuous study variables for normality and found all values of skewness and kurtosis to be within acceptable ranges.

Racial Identity Profiles

Using the data from the seven subscales of the MIBI-S measures at Time 1, six latent class models (ranging from one to six clusters) were estimated using latent profile analysis (Vermunt & Magidson, 2005). The data were analyzed using Latent Gold 5.0 statistical software. Of the six models estimated, the four-cluster model was the most appropriate solution. It had the second lowest Bayesian information criterion (BIC; 3,044.3), a nonsignificant bootstrap p value (.196), and notable reduction in L^2 (15%) relative to the one-class model. Although the five-cluster solution showed a further reduction in L^2 (16%), this model also had a higher BIC (3,067.9) and a significant bootstrap p value (.04), suggesting that it was not as parsimonious as the four-cluster model. As a result, the four-cluster model was utilized as our final solution.¹

Next, raw means and standardized means (indexed by z scores) of each racial identity variable were used to describe and label the clusters (see Table 2). The largest cluster was labeled *Undifferentiated* ($n = 48$; 36% of sample). This cluster was characterized by scores slightly below the sample mean on six of the seven racial identity subscales, with the exception of the nationalist subscale, which was near the sample mean. With respect to the raw means,

the Undifferentiated cluster had relatively high scores on the Assimilationist, Private Regard, Humanist, and Oppressed Minority subscales; moderate scores on Centrality and Nationalist; and low scores on Public Regard.

The second largest cluster was labeled *Multiculturalist* ($n = 34$; 26%) and was characterized by scores near the mean for Nationalist and Oppressed Minority ideology and high scores relative to the sample mean (~ 0.5 SD above the mean) for Private Regard, Public Regard, Centrality, Humanist, and Assimilationist subscales. In terms of the raw means, this cluster had relatively high scores on Private Regard, Centrality, Minority, Humanist, and Assimilationist subscales and moderate scores on the Public Regard and Nationalist subscales.

The third largest cluster ($n = 33$; 25%), Race-Focused, was characterized by high standardized scores on Centrality, Nationalist, and Private Regard (~ 1 SD above the mean); scores near the mean for Public Regard, Assimilationist, and Minority subscales; and low Humanist scores relative to the sample. With respect to the raw means, the Race-Focused cluster had relatively high scores on Private Regard, Centrality, Minority, Humanist, and Assimilationist subscales; moderate Nationalist scores; and low scores on the Public Regard subscale.

The smallest cluster ($n = 19$; 14%), Humanist, had low standardized scores (~ 1 SD below the mean) on Private Regard, Centrality, and Nationalist Subscales; scores slightly above the mean on Oppressed Minority and Assimilationist; slightly below mean level scores on Public Regard; and high standardized scores on Humanist (0.9 SD above the mean). In considering the raw means, the Humanist cluster had moderately high scores on the Oppressed Minority, Humanist, and Assimilationist subscales and moderately low scores on Public Regard, Private Regard, Centrality, and Nationalist subscales. Figure 1 presents a graphic summary of the four racial identity clusters using z -standardized means of the racial identity variables at Time 1.

Cluster Group Differences in Demographic and Racial Discrimination Variables

Before conducting the main analyses, we examined cluster group differences in age, gender, maternal educational attainment, and cohort to rule out confounding group differences that might also explain racial identity cluster effects. Results suggested no significant cluster differences in gender, $\chi^2(3, N = 157) = 4.07$, $p = .254$; age, $F(3, 153) = .33$, $p = .801$; maternal educational attainment, $F(3, 151) = .49$, $p = .693$; or cohort, $\chi^2(3, N = 157) = 0.69$, $p = .876$. Analysis of covariance (ANCOVA) was utilized to assess cluster differences in racial discrimination experiences at Time 1. No significant main effect was found for cluster membership in racial discrimination experiences at Time 1, $F(3, 148) = 2.16$, $p = .095$.

¹ At the editor's suggestion, details of the latent profile analysis (e.g., BIC values, bootstrap estimates for each of the cluster solutions, etc.) were omitted to comply with the page requirements. These additional details are available upon request.

Table 1
Summary of Intercorrelations, Means, and Standard Deviations for Key Study Variables ($N = 157$)

	1	2	3	4	5	6	7	8	9	10
1. RD Time 1	—									
2. IP Time 1	-.03	—								
3. IP Time 2	.37*	.31**	—							
4. Centrality	.09	.02	-.13	—						
5. Private regard	-.12	-.03	-.34**	.67**	—					
6. Public regard	-.33**	-.01	-.36**	.16*	.29**	—				
7. Assimilationist	-.17*	.02	-.12	.11	.18	.07	—			
8. Humanist	-.14	.07	-.04	-.25**	-.13	.17*	.24**	—		
9. Minority	.14	.07	.09	.01	-.04	.09	.29**	.21**	—	
10. Nationalist	.21*	.08	.09	.46**	.31**	-.09	.01	-.43**	.09	—
<i>M</i>	1.36	2.71	2.73	4.97	5.72	3.18	6.13	5.50	5.00	3.62
<i>SD</i>	0.93	0.76	0.86	1.37	1.24	1.16	0.82	0.98	1.10	0.97

Note. RD = racial discrimination; IP = impostor phenomenon.

* $p < .05$. ** $p < .01$.

Associations Among Racial Discrimination, Racial Identity, and IP

General linear model analysis of variance (ANOVA) was used to investigate the role of racial discrimination as a risk factor and patterns of racial identity as a moderating variable in the association between racial discrimination and IP. An ANOVA framework was selected given that the analytic software (SPSS 24) used for the current analyses generates results without having to create dummy variables as done in regression. However, the analogous regression model of interest is $Y_i = \infty + \beta X_i + \gamma_2 D_{i2} + \gamma_3 D_{i3} + \gamma_4 D_{i4} + \delta(X_i D_{i2}) + \delta(X_i D_{i3}) + \delta(X_i D_{i4}) + \epsilon_i$, where X is racial discrimination; D_2 , D_3 , and D_4 represent three dummy regressors for racial identity profile group; and XD_2 , XD_3 , and XD_4 are the interaction regressors. ∞ denotes the intercept, and β , γ , and δ represent the main effect and interaction regression parameters. Age, gender, mother's highest level of education completed, cohort, and IP at Time 1 were included as covariates. Discrimination and cluster group membership at Time 1 were entered as main

effect predictors of the outcome variable—IP at Time 2. Finally, the interaction between racial discrimination experiences at Time 1 and cluster group membership (at Time 1) was included as a predictor of IP at Time 2. All continuous variables were mean centered and the interaction terms were the cross-product terms of the centered discrimination variables and the cluster group membership variable at Time 1. Consistent with standard practice (see Neblett et al., 2008; Wong, Eccles, & Sameroff, 2003), we interpreted a significant main effect for the cluster group membership variable as an indicator that certain patterns of racial identity may act to compensate for the risk conferred by discrimination. A significant interaction effect would indicate that particular patterns of racial identity acted as either protective or vulnerability factors in the context of racial discrimination.

The omnibus test for the analytic model (see Table 3) was significant, $F(12, 119) = 6.70, p < .001$. Gender (0 = female; 1 = male) and Time 1 IP were significant covariates in this model. Females reported greater levels of IP than males, net the effect of

Table 2
Raw and Standardized (z Score) Means and Standard Deviations of Racial Identity Subscales at Time 1 by Racial Identity Cluster ($N = 157$)

Racial identity variable	Undifferentiated	Multiculturalist	Race-Focused	Humanist
Raw means				
Racial centrality	4.30 (0.91)	5.64 (0.79)	6.32 (0.53)	4.97 (1.37)
Private regard	5.22 (1.15)	6.47 (0.47)	6.65 (0.40)	5.72 (1.24)
Public regard	2.86 (1.07)	3.90 (1.09)	2.92 (1.07)	3.18 (1.37)
Assimilationist	5.64 (0.83)	6.57 (0.54)	6.22 (0.79)	6.13 (0.82)
Humanist	5.20 (0.93)	6.13 (0.57)	4.70 (0.74)	5.50 (0.98)
Oppressed minority	4.89 (1.00)	5.31 (1.06)	4.72 (1.12)	5.00 (1.10)
Nationalist	3.64 (0.77)	3.35 (0.82)	4.51 (0.82)	3.62 (0.97)
Standardized means				
Racial centrality	-0.49	0.49	0.99	-1.37
Private regard	-0.40	0.60	0.74	-1.40
Public regard	-0.28	0.62	-0.22	-0.14
Assimilationist	-0.60	0.54	0.11	0.34
Humanist	-0.30	0.64	-0.83	0.92
Oppressed minority	-0.10	0.28	-0.26	0.14
Nationalist	0.02	-0.27	0.92	-1.08

Note. Values in parentheses are *SD*.

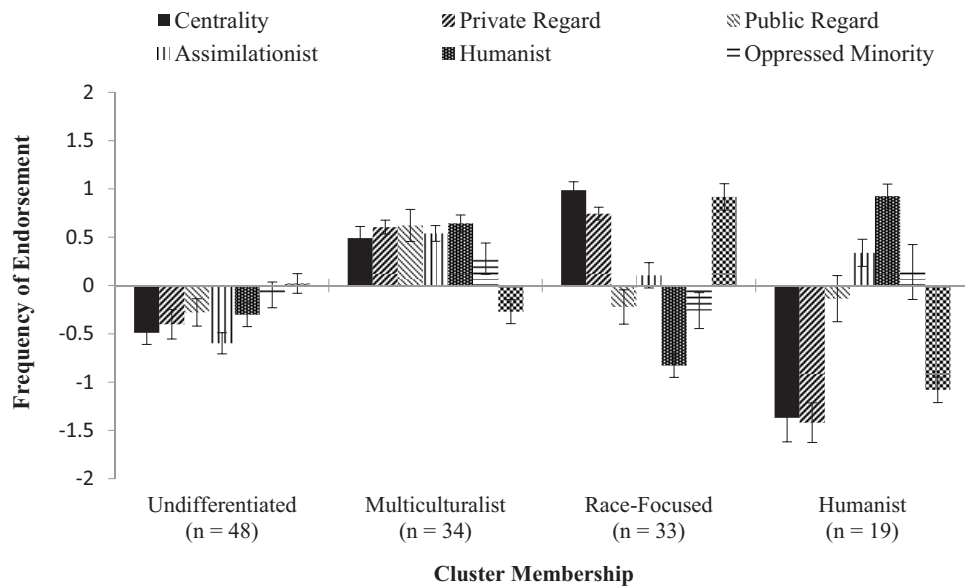


Figure 1. Summary of racial identity cluster groups.

Time 1 IP ($b = -.36, p = .013$). The level of IP at Time 1 was positively associated with the level of IP at Time 2 ($b = .36, p < .001$).

Racial discrimination at Time 1 was positively associated with IP at Time 2, controlling for Wave 1 IP ($b = 1.07, p = .002$, partial $\eta^2 = .17$), indicating that individuals who reported greater discrimination in the past year at Time 1 endorsed higher levels of IP at Time 2.

With respect to the effect of racial identity, there was a statistically significant difference at the $p < .01$ level in Wave 2 IP, $F(3, 119) = 5.35, p = .001$, partial $\eta^2 = .12$, which would be characterized as a medium effect (Cohen, 1988, p. 22). Post hoc comparisons using the Tukey's honestly significant difference (HSD) test indicated that the Wave 2 mean IP score for the Humanist group ($M = 3.49, SE = 0.27$) was significantly higher than that of the Undifferentiated ($M = 2.87, SE = 0.10$), Multiculturalist ($M =$

Table 3
General Linear Model Analysis of Variance Predicting the IP at Time 2 From Racial Discrimination (T1), Racial Identity (T1), and Control Variables (N = 157)

Source	df	b (SE)	Type III sum of squares	Partial η^2	F	p
Corrected model	12	—	39.41	.40	6.70	.00
Intercept	1	2.03 (3.49)	0.09	.00	0.18	.67
Gender	1	-0.36 (0.14)	3.11	.01	6.34	.01
Age	1	0.03 (0.18)	0.02	.00	0.04	.85
Mother's educational attainment	1	-0.01(0.04)	0.03	.00	0.05	.82
Cohort	1	—	0.02	.00	0.04	.85
IP (T1)	1	0.36 (0.08)	8.71	.13	17.79	.00
Discrimination (T1)	1	1.07 (0.35)	11.53	.17	23.54	.00
Cluster group (C)	3	—	7.86	.12	5.35	.00
C = 1		-0.63 (0.29)		.04		.03
C = 2		-1.10 (0.31)		.10		.00
C = 3		-0.81 (0.30)		.06		.01
C \times Discrimination	3	—	3.38	.06	2.30	.08
C = 1 \times Discrimination		-0.57 (0.37)		.02		.11
C = 2 \times Discrimination		-0.89 (0.39)		.04		.02
C = 3 \times Discrimination		-0.77 (0.39)		.03		.04
Error	119		58.30			
Total	132		1,086.36			
Corrected total	131		97.71			

Note. IP = impostor phenomenon; T1 = Time 1. C = cluster group (1 = Undifferentiated; 2 = Multiculturalist; 3 = Race-Focused; reference category = Humanist). Gender (0 = female; 1 = male).

2.40, $SE = 0.13$), and Race-Focused ($M = 2.69$, $SE = 0.12$) groups. The group mean difference for IP at Wave 2 was also significantly different between the Undifferentiated and Multiculturalist group.

Finally, the interaction effect between racial discrimination and racial identity cluster profile approached significance, but it did not satisfy the .05 cutoff, $F(3, 119) = 2.30$, $p = .081$, partial $\eta^2 = .06$. Racial discrimination was associated with higher subsequent levels of IP for all groups except the Multiculturalist group ($b = .77$, $p = .259$).

Discussion

This study sought to examine the associations among racial discrimination, racial identity, and IP in African American college students. The first aim of this study was to examine the unique relationship between racial discrimination and IP. Racial discrimination was positively related to higher subsequent levels of IP, controlling for initial levels of IP. Our study is unique in that it is among the first to suggest that racial discrimination experiences lead to increased levels of IP over time. It is possible that racial discrimination experiences, particularly at a PWI, may lead to feelings of social isolation—a significant and positive predictor of psychological distress (Negi, 2013)—that may precede and perpetuate cognitions of IP. In addition, Jones and colleagues (2016) argued that individuals may make internal attributions (e.g., it's me, not them) or blame themselves to make sense of racial discrimination. Given the chronicity of racial discrimination in the lives of African American youth (Hurd, Varner, Caldwell, & Zimmerman, 2014), such attributions may become internalized, leading to feelings of depression, anxiety, and decreased self-esteem, ultimately manifesting as IP.

Second, we examined whether racial identity would act as a protective or vulnerability factor in the context of racial discrimination experiences and IP. We predicted that certain combinations of identity (i.e., high reports of racial centrality, high reports of private regard, and low reports of public regard) would confer a protective effect or attenuate the deleterious effects of racial discrimination on IP. We also expected that racial identity patterns characterized by high Humanist or Assimilationist ideology would increase vulnerability or exacerbate the impact of racial discrimination on IP. Inconsistent with previous work that has found no link between identity and IP among African American college students (Ewing et al., 1996), the current study found that initial racial identity attitudes pertaining to the significance and meaning of race were associated with subsequent levels of IP. Students in the Multiculturalist group reported the lowest levels of IP at Time 2. Their scores were significantly lower than the scores of the Undifferentiated group and the Humanist group, which reported the two highest levels of IP at Time 2 compared with all other groups. Although not statistically significant, a medium interaction effect was also observed, whereby racial discrimination was positively related to IP at Time 2 for all profile groups except the Multiculturalist group.

At the very least, the reduced levels of IP in the Multiculturalist group are consistent with this pattern of racial identity acting as a compensatory resilience factor. Furthermore, this result is consistent with literature suggesting that having a positive image toward oneself and one's ethnic group can repudiate the development and

internalization of feelings and messages of inferiority fueled by discriminatory encounters (Mandara, Gaylord-Harden, Richards, & Ragsdale, 2009; Sellers et al., 2006; Tynes, Umama-Taylor, Rose, Lin, & Anderson, 2012). However, contrary to our prediction, high assimilationist and humanist ideologies were also key components in this profile, which suggests that when combined with high levels of centrality and regard, individuals who perceive that society positively views their particular ethnic group, and hold high aspirations to connect with others on the basis of shared human experiences, may positively impact appraisals of experiences of discrimination and subsequent psychological well-being.

On the other hand, it may be that students in the Undifferentiated and Humanist profiles reported significantly higher IP because their lower relative levels of private regard may have increased risk for anxiety and internalizing symptoms after encounters with discrimination (Bynum et al., 2008). Hammond (2012) suggests that individuals lacking positive coping mechanisms in the face of discrimination may stand a higher risk to internalize the negative effects of discrimination (e.g., anxiety, depression), which may, in turn, lead to feelings of intellectual incompetence and significantly impede on academic achievement (Chao, Mallinckrodt, & Wei, 2012). Furthermore, although low public regard (which was observed in both groups) has generally been found to be a protective factor in the context of racial discrimination (Neblett & Roberts, 2013; Sellers et al., 2006), the current study suggests that when combined with lower levels of private regard and centrality, low public regard may actually increase risk for negative psychological outcomes such as IP. Taken together, these findings highlight the importance of using a person-centered approach in examining racial identity because certain dimensions of racial identity alone may operate in considerably different ways than when considered in combination with other dimensions of identity.

Clinical Implications

Findings from the current study have important implications that could help to inform treatment of African Americans attending PWIs. First, our findings suggest that experiences with racial discrimination are important to consider regardless of expression in relation to the mental health functioning of African American emerging adults. Therefore, clinicians are encouraged to validate, discuss, and process the psychological impact of racial discrimination with their clients because recognizing and discussing encounters of discrimination can be normalizing and empowering to clients (Villegas-Gold & Yoo, 2014). Second, given the link between racial identity and IP, clinicians should have at least a basic understanding of what a client's racial identity may be, particularly when discrimination is salient in their presenting problems. Clinicians could assess racial identity and then use this information in the case of formulation and treatment (e.g., recommending attendance at cultural events to bolster one's identity; Jones & Neblett, 2016; Neblett et al., 2016).

Study Limitations and Future Directions

Although this study makes several important contributions to the literature, some limitations should be noted. First, this current study focused primarily on African American female college stu-

dents attending a PWI and may not generalize beyond the present sample. Second, the measure used to assess for IP may not adequately capture the unique experiences of African American young-adult college students. Exploratory analyses illustrate that on the CIPS, African American college students seem to endorse some items (e.g., I can give the impression that I'm more competent than I really am) more than others (e.g., At times, I feel my success has been due to some kind of luck), suggesting that the traditional conceptualization of IP may not fully capture impostor-related experiences within African American college students. Third, we observed an interaction effect that failed to meet statistical significance but that had a small to medium effect size, suggesting that the study may have been underpowered to detect an actual effect. Thus, it is possible that our failure to reject the null hypothesis could reflect a Type II error. We encourage replication of our results with larger sample sizes.

Conclusion

Through use of an innovative analytical approach, our study adds to the scant IP literature investigating the role that racial identity may play in protecting or increasing risk for experiencing IP in the context of discrimination. Results revealed that racial discrimination experiences were significantly predictive of increased feelings of intellectual ineptitude. Certain racial identity profiles were associated with increased and decreased IP across all levels of racial discrimination. Therefore, racial identity is an important individual factor to take into account in understanding the relationship between discrimination and psychological well-being among African American emerging adults. Future work should build on the current study, elucidating the complex underlying mechanisms that link race-related stress and IP in African American young adults.

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