

Incorporating a Race Salience Subscale Into the Cross Racial Identity Scale (CRIS)

Journal of Black Psychology

2020, Vol. 46(8) 638–658


© The Author(s) 2020

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/0095798420967598

journals.sagepub.com/home/jbp

Frank C. Worrell¹ , Rodolfo Mendoza-Denton¹,
Beverly J. Vandiver², Peony E. Fhagen³,
and William E. Cross Jr.⁴

Abstract

In this study, we examined the internal consistency and structural validity of scores on an expanded version of the Cross Racial Identity Scale (CRIS) consisting of the original six subscales—Assimilation, Miseducation, Self-Hatred, Anti-White, Afrocentricity, and Multiculturalist Inclusive—and a seventh subscale called Race Salience. Participants consisted of two samples of African Americans. Sample 1 had 324 participants, most of whom were students at historically Black institutions, and Sample 2 had 340 students attending a predominantly White institution. CRIS subscale scores, including Race Salience were internally consistent in Sample 1, and an exploratory factor analysis supported the structural validity of the race salience score. A confirmatory factor analysis provided support for the seven-factor structure. Internal consistency and structural validity results were replicated in Sample 2. Future studies should examine other aspects of construct validity on this expanded version of the CRIS, such as convergent and discriminant validity, and the impact of seven subscales on the number and type of racial identity profiles that CRIS scores can yield.

¹University of California, Berkeley, CA, USA

²The Ohio State University, Columbus, OH, USA

³Colorado College, Colorado Springs, CO, USA

⁴University of Denver, Denver, CO, USA

Corresponding Author:

Frank C. Worrell, Graduate School of Education, University of California, Berkeley, 2121 Tolman Berkeley Way (Fourth Floor), Berkeley CA 94720-1670, USA.

Email: frankc@berkeley.edu

Keywords

African American, CRIS, Cross Racial Identity Scale, nigrescence, validity

Ethnic and racial identity are important psychological constructs in minority populations, and racial identity is one of the most frequently examined constructs in African American samples (Cokley & Vandiver, 2012). One of the more prominent theories of Black racial identity is Cross' (1971, 1991; Cross & Vandiver, 2001) nigrescence theory. Initially conceptualized as a developmental stage model (Cross, 1971), the most recent iteration of nigrescence theory—the expanded nigrescence model (NT-E; Cross & Vandiver, 2001)—is an attitudinal model, which is operationalized by the Cross Racial Identity Scale (CRIS; Vandiver et al., 2000; Worrell et al., 2004).

The CRIS assesses six racial identity attitudes: assimilation, miseducation, self-hatred, anti-White, Afrocentricity, and multiculturalist inclusive. Assimilation attitudes reflect a preference for a national identity label (e.g., American) rather than an ethnic label (e.g., *African American*). Miseducation attitudes assess acceptance of the negative stereotypes about African Americans, and self-hatred attitudes reflect a negative view of the self because one is African American. Anti-White attitudes reflect a strong, negative emotional response toward European Americans, and Afrocentricity attitudes assess the degree to which individuals believe that African Americans should live by Afrocentric principles. Finally, multiculturalist inclusive attitudes assess Black self-acceptance alongside a willingness to engage with other cultural groups.

There is substantial psychometric evidence in support of the six CRIS subscale scores in the extant literature. CRIS scores have been found to be internally consistent in adolescent, emerging adult, and adult samples (e.g., Worrell, 2008; Worrell et al., 2014; Worrell et al., 2004) and structural validity has been supported using exploratory factor analyses (Gardner-Kitt & Worrell, 2007; Simmons et al., 2008; Worrell et al., 2004), confirmatory factor analyses (CFAs; e.g., Vandiver et al., 2002; Worrell et al., 2011; Worrell et al., 2014; Worrell & Watson, 2008), and item response theory (Sussman et al., 2013). Research has also demonstrated that the scores are not substantially affected by social desirability (Vandiver et al., 2002), or by demographic characteristics (Fhagen-Smith et al., 2010). In one of the studies on the development of the CRIS, Worrell et al. (2001) indicated that there were two hypothesized racial identity constructs—intense Black involvement and multiculturalist racial—that were not yet operationalized. In the current study, we are introducing another construct not currently operationalized on

the CRIS—that is, race salience. In addition to reporting on the internal consistency of race salience scores, we also examined the structural validity of racial salience scores individually and in the context of the CRIS framework. We begin with a discussion of the construct of racial salience and the evolution of nigrescence theory. Next, we describe the race salience subscale that is presented in this study.

Race Salience

Race salience has been an important aspect of racial identity theorizing for many years (e.g., Cross, 1971, 1991), although it has seldom been operationalized. In the article introducing the Multidimensional Inventory of Black Identity (MIBI) to the literature, Sellers et al. (1997) defined race salience as “the extent to which a person’s race is a relevant part of her or his self-concept at a particular point in time” (p. 806). Although salience is not measured on the MIBI, Sellers et al. placed considerable emphasis on the construct:

Salience is dependent on the context of the situation as well as the person’s proclivity to define her or himself in terms of race (i.e., centrality). Salience is the dynamic aspect of racial identity. It is also the dimension most relevant to predicting proximal behavioral responses to situations. . . . In general, salience is the mechanism by which the other three stable dimensions [centrality, regard, and ideology] influence the way a person experiences a particular situation. (p. 806)

Sellers et al. opted not to measure salience as they felt that the dynamic and contextual nature of the construct meant that it would be difficult to capture on a survey measure. However, an argument can be made that the centrality construct on the MIBI—defined as “a measure of whether race is a core part of an individual’s self-concept” (Sellers et al., 1997, p. 806)—is a strong proxy for race salience.

Cross and Vandiver (2001) also reported being interested in race salience when they were developing the CRIS. They had hoped to include a race salience scale but came to a similar conclusion as Sellers et al. (1997):

The [CRIS] team searched for a subscale that might globally capture the notion of [racial] engagement. Had it been produced it would have been called a race-salience scale (e.g., a scale that measures the degree to which race and Black culture are important to an individual). The effort was eventually dropped. (Cross & Vandiver, 2001, p. 376)

Although the CRIS does not include a race salience scale, Cross and Vandiver (2001) contended that the CRIS assessed racial salience *indirectly*, as the six attitudes reflected different levels of racial salience. Assimilation attitudes are low salience; miseducation attitudes are moderate in racial salience; self-hatred, anti-White, and Afrocentric attitudes are high in racial salience; and multiculturalist-inclusive attitudes are moderate in racial salience. The inclusion of a race salience scale would allow for the *direct* examination of this construct. In recent work, the CRIS team developed the Cross Ethnic-Racial Identity Scale–Adult (CERIS-A; Worrell et al., 2016), which extends the measurement of the constructs assessed on the CRIS to Asian American, European American, and Latinx samples. On the CERIS-A, which was recently introduced to the literature (Worrell et al., 2019), ethnic-racial salience is defined as “the degree to which individuals consider race in their daily lives” (Worrell et al., 2019, p. 406), and this definition of racial salience is the one used in the current study.

The Evolution of Nigrescence Theory

In the original nigrescence model (NT-O; Cross, 1971), racial identity was conceptualized as a developmental stage model, with individuals moving from Pre-Encounter (Stage 1: anti-Black, pro-White) through Encounter to Immersion-Emersion (Stage 3: pro-Black; anti-White), Internalization, and Internalization Commitment (Stage 5: pro-Black; Worrell, 2012). Cross (1971) theorized that African Americans in Stage 1 had low self-esteem, and the movement from Stage 1 to Stage 5 was accompanied by increases in self-esteem. Data from studies using the Racial Identity Attitude Scale (Parham & Helms, 1981), developed to operationalize NT-O, led Cross to revise his nigrescence theory. In the revised nigrescence framework (NT-R), Cross (1991) kept the stage framework—he combined Stages 4 and 5—but began to move in the direction of racial identity as worldviews (Helms, 1986; Sue, 1978) rather than stages. He also decoupled self-esteem from the stages, noting that African Americans could have high self-esteem in any stage and that only African Americans who were anti-Black would be low in self-esteem.

The most recent version of nigrescence theory, the NT-E (Cross & Vandiver, 2001), is a multi-attitudinal framework allowing for more complexity in racial identity than a stage theory. An attitudinal framework aligns with the way in which racial identity is conceptualized in the multidimensional model of racial identity on which the MIBI is based (Sellers et al., 1997). According to NT-E, racial identity attitudes, although relatively stable, can be affected by contextual factors. Moreover, individuals can have low, medium, or high scores on one or more of the racial identity attitudes leading

to a “vast array of identity profiles or types” (Cross & Vandiver, 2001, p. 374). In line with this hypothesis, CRIS scores have been used to create generalizable racial identity profiles (Worrell et al., 2006) found to be related in theoretically congruent ways to psychological constructs in several studies (e.g., Chavez-Korell & Vandiver, 2012; Telesford et al., 2013; Whittaker & Neville, 2010; Worrell et al., 2014). Although the CRIS is not the only scale with which racial identity profiles have been studied, the CRIS is currently the only instrument that has demonstrated generalizable profiles as well as profiles based on the full set of subscales. A subscale assessing racial salience will result in additional CRIS profiles and could benefit the field by allowing researchers to see how salience interacts with other CRIS subscales.

The Race Salience Subscale

The CRIS consists of six 5-item subscales and 10 filler items; thus, respondents complete 40 items, although only 30 are scored. Six of the 10 filler items on the CRIS are focused on race. These items had been written and included in early versions of the CRIS as part of the scale development process (see Vandiver et al., 2001; Vandiver et al., 2002; Vandiver & Worrell, 2001) but were not included in the final six subscales that make up the CRIS, as other items better captured those six constructs. They were included with the CRIS items to provide increased separation of the items that are actually scored. In a 2015 dissertation study, Hernandez included all of the filler items in an exploratory factor analysis (EFA) of CRIS items, and a factor emerged consisting of several of the filler items that assessed race. The 4 filler items that did not assess race did not load on any scale. After reading Hernandez’s dissertation, we reviewed the filler items and noted that six of them were in keeping with the definition of racial salience used in the CERIS-A—that is, the extent to which individuals consider race in their daily lives. One item would have been reverse coded, in that endorsement of the item indicated that individuals *did not* pay attention to race. As the CRIS has no reverse-coded items, this item was not adopted. The other five items assessed the importance that individuals place on racial and cultural issues in several contexts (e.g., choice of reading materials, types of decorations used, and views of candidates in elections) and became the basis for examination in this study. The five items are presented in Table 1.

In the process of developing the CERIS-A (Worrell et al., 2016), an instrument based on the CRIS that can be used with different ethnic and racial groups in the United States, four ethnic-racial salience items were included as a seventh subscale. Internal consistency estimates for ethnic-racial salience scores on the CERIS-A ranged from .74 in European

Americans and individuals who chose Other to .80 in Asian Americans (Worrell et al., 2019). Both the six-factor model (without the ethnic-racial salience factor) and the seven-factor model had most fit indices in the acceptable range for African American, Asian American, European American, and Latinx participants, although fit indices were a little lower for the seven-factor model. The comparative fit index (CFI) values ranged from .905 to .954, the Tucker-Lewis index (TLI) values ranged from .890 to .948, and the root mean square error of approximation (RMSEA) values ranged from .067 to .092. Ethnic-racial salience scores demonstrated scalar invariance across gender. This study demonstrated the viability of a race salience factor and set the stage for the current study.

The Present Study

The main goals of the present studies were (a) to examine the internal consistency of scores on a race salience subscale and (b) to assess if a seven-factor version of the CRIS—including a race salience factor—would be supported psychometrically. This question has both psychometric and theoretical implications. Many of the racial identity scales in the literature have limited psychometric support (Cokley & Vandiver, 2012; Sabnani & Ponterotto, 1992; Simmons et al, 2008; Vandiver et al., 2009), calling the theoretical models into question, and evidence for the seven-factor structure of the MIBI has only been reported in one study in which a short version of the scale was examined (Scottham et al., 2008). Thus, it is important to ascertain if the seven-factor model of the CRIS is supported. As a seven-factor model is more complex than a six-factor model, our goal was to find out if the seven-factor model was a viable model, psychometrically.

Study I

We examined several questions in Study 1. First, we examined the internal consistency of five race salience items and the structural validity of the race salience items only using EFA in Sample 1. We then examined the race salience items in the context of the CRIS model in Sample 1 using CFAs, looking at the fit for both the six-factor model and the seven-factor model with the race salience subscale. We hypothesized that (a) race salience scores would be internally consistent (i.e., $\alpha < .70$), (b), the five items would form a viable factor in the EFA, and (c) the seven-factor model of the CRIS would yield acceptable fit in the CFA analysis. As was found with the CERIS-A (Worrell et al., 2019), we expected that the fit indices would be lower for the seven-factor model than the six-factor model, given the greater model

complexity, but we hypothesized that the seven-factor model would still have a good fit.

We also examined the correlations between race salience scores and other CRIS scores in the sample. Several hypotheses informed this question and provided an examination of convergent validity. Assimilation attitudes assess a preference for being called American rather than African American, these attitudes are in opposition to race salience, and we hypothesized that race salience and assimilation attitudes would be negatively correlated. We hypothesized that scores on the other five subscales would be positively correlated with race salience scores. Miseducation, self-hatred, Afrocentric, and multiculturalist-inclusive attitudes are all focused on race, although the focus of the former two are negative and the latter two are positive. Anti-White attitudes also have a strong focus on race and were also expected to be positively correlated with race salience attitudes. Although Ferguson (2009) suggested treating correlations $\geq |.20|$ as meeting the minimum standard for practical significance, we chose to be more conservative and interpreted correlations $\geq |.30|$ as practically significant.

Method

Participants. Participants in this study consisted of a sample of African Americans from a previous study using the CRIS (Worrell et al., 2006). The sample had 324 participants, 94.4% of whom reported attending historically Black institutions. They ranged in age from 18 to 54 years ($M = 22.12$ years; $SD = 4.59$), and 55.9% identified as female (44.1% as male). Self-reported GPA was 2.94 ($N = 309$), and 52.8% indicated that they were from middle-class families, with 28.1% describing their family's socioeconomic status as poor or working class and 17.6% indicating that they were upper-middle class or wealthy. Five students did not respond to the question on socioeconomic status.

Measures and Procedure. The CRIS (Vandiver et al., 2000) was the only instrument used in the study. It is a 30-item instrument consisting of six 5-item subscales assessing assimilation, miseducation, self-hatred, anti-White, Afrocentricity, and multiculturalist-inclusive racial identity attitudes. Ten filler items are interspersed among the 30 items to create some separation of items on the same subscale. In this study, five of the filler items were designated as race salience items based on content and Hernandez's (2015) results (see Table 1). All items are rated on a 7-point Likert-type scale with higher numbers indicating greater endorsement of the item.

Table 1. Race Salience Items on the Expanded Cross Racial Identity Scale ($N = 324$).

Item No.		<i>M</i>	<i>SD</i>	Coefficient from EFA
Item 8	When I walk into a room, I always take note of the racial make-up of the people around me.	4.59	1.89	.51
Item 19	When I read the newspaper or a magazine, I always look for articles and stories that deal with race and ethnic issues.	3.40	1.80	.63
Item 29	When I have a chance to decorate a room, I tend to select pictures, posters, or works of art that express strong racial-cultural themes.	4.13	1.82	.50
Item 32	When I vote in an election, the first thing I think about is the candidate's record on racial and cultural issues.	5.07	1.70	.53
Item 35	During a typical week in my life, I think about racial and cultural issues many, many times.	4.09	1.82	.63

Note. EFA = exploratory factor analysis.

Internal consistency estimates for CRIS scores are quite strong, with median values of alpha estimates for scores on the six subscales ranging from .78 to .86 across samples and subscales (Worrell & Watson, 2008). Omega estimates, an internal consistency measure based on the salient coefficients loading on a factor, have also been in the .80 to .90 range (Worrell et al., 2011). There is also considerable validity evidence in support of CRIS scores in the literature. The six-factor structure has been supported using both classical test theory and item response theory (Simmons et al., 2008; Sussman et al., 2013; Vandiver et al., 2002) in samples in the United States, and the factor structure has also been supported in a Black sample in Jamaica (Worrell & MacFarlane, 2017). Convergent validity for CRIS scores has been established with MIBI scores (Sellers et al., 1997) and scores of the Multigroup Ethnic Identity Measure (Phinney, 1992; see Vandiver et al., 2002; Worrell & Gardner-Kitt, 2006), and discriminant validity analyses have shown that CRIS scores are not strongly associated with the Big Five or social desirability (Vandiver et al., 2002). Scores on the Self-Hatred subscale have positive associations with psychopathology (Worrell et al., 2011) and negative associations with self-esteem (Awad, 2007; Vandiver et al., 2002).

Participants were recruited by several graduate students via flyers, websites, and requests to professors, college classes, and student organizations. Some participants completed the questionnaire including the CRIS in sessions supervised by the graduate students. Other participants completed the questionnaires on their own time and brought them back in or mailed them in. For students who mailed them in, stamped return envelopes were provided.

Results and Discussion

Three sets of analyses were conducted in Study 1. First, we examined the descriptive statistics for scores on the six CRIS subscales and the race salience subscale. Next, we examined the structural validity of the race salience scores only using EFA. Finally, we examined the structural validity of the original CRIS model (six factors) and the modified model *including race salience* (seven factors) using CFAs. Although best practice recommends not using the same sample for EFAs and CFAs, this study was an exception in two ways. The EFA was used to examine the five race salience items *only* to see if they formed a viable factor. The CFA was used to examine the seven-factor model, including the race salience items. Thus, the model tested in the CFA was not the race salience model examined with the EFA but the full CRIS model with race salience as one of seven factors. In this way, we were able to assess the seven-factor model in Study 1 data before examining the seven-factor model in Study 2.

Means and standard deviations for the five race salience items are provided in Table 1. Skewness values for the items ranged from -0.93 to 0.39 ($Mdn = -0.17$), and kurtosis values were similar, ranging from -1.11 to $.02$ ($Mdn = -0.90$). Table 2 contains means, standard deviations, internal consistency estimates (α), and intercorrelations among the seven subscales for Sample 1. As has been the case in other studies of the CRIS, mean scores on the multiculturalist-inclusive subscale were the highest, and mean scores on the self-hatred and anti-White subscales were the lowest (Vandiver et al., 2002; Whittaker & Neville, 2010).

To establish if the five race salience items loaded on a single factor, a one-factor EFA (principal axis extraction) was conducted in Sample 1. In keeping with best practice (Watkins, 2018), several criteria were consulted to determine the number of viable factors. In keeping with the theoretical model—that is, a one-factor scale assessing race salience—parallel analysis and the scree test supported a one-factor model. All five items obtained coefficients $\geq .50$ in the EFA (see Table 1), and these coefficients yielded an omega estimate of internal consistency of $.70$ based on the factor coefficients. As hypothesized, race salience scores were negatively and meaningfully correlated (i.e., $r \geq$

Table 2. Descriptive Statistics for Scores on the Expanded CRIS From Sample 1 Attending an HBI.

Subscales	M	SD	α	95% CI ^a	1	2	3	4	5	6	7
1. PA	3.10	1.31	.75	.71, .79	—	.35	.40	-.25	-.36	.12	-.49
2. PM	3.66	1.42	.82	.79, .85	.27	—	.42	.03	.17	-.08	-.14
3. PSH	1.80	1.00	.77	.74, .81	.25	.32	—	.32	.11	-.18	.06
4. IEAW	2.01	1.17	.87	.85, .90	-.19	.02	.20	—	.43	-.46	.50
5. IA	3.79	1.27	.82	.80, .86	-.27	.14	.12	.33	—	-.10	.64
6. IMCI	5.07	1.19	.77	.72, .81	.11	-.06	-.09	-.33	-.08	—	-.05
7. RS	4.25	1.21	.69	.64, .74	-.33	-.09	.08	.34	.49	-.02	—

Note. N = 324. CRIS = Cross Racial Identity Scale; HBI = historically Black institution; PA = Pre-encounter Assimilation; PM = Pre-encounter Miseducation; PSY = Pre-encounter Self-Hatred; IEAW = Immersion-Emerison Anti-White; IA = Internalization Afrocentricity; IMCI = Internalization Multiculturalist Inclusive; RS = Race Salience. Correlations below the diagonal are for the observed variables and correlations above the diagonal are for latent variables obtained from Model 2 of the confirmatory factor analyses in Table 3. Correlations > .14 are significant at the .01 level.

^aConfidence intervals were calculated with SPSS syntax from Fan and Thompson (2003).

|.30|) with assimilation scores and positively and meaningfully correlated with anti-White and Afrocentricity scores (see Table 2). Contrary to hypotheses, race salience scores were not meaningfully associated with miseducation, self-hatred, or multiculturalist-inclusive scores.

Once we had established that the five race salience items formed a viable factor, we used CFAs to examine the full CRIS models. We used multiple fit indices to evaluate the fit of the data to the specified models (Byrne, 2012), including the CFI, the TLI, and the RMSEA and its 90% confidence interval, and we used the robust weighted least squares estimator, which is recommended for ordinal data. Acceptable fit was based on CFI and TLI values $\geq .90$ and an RMSEA value $\leq .08$, and excellent fit was based on CFI and TLI values $\geq .95$ and an RMSEA value $\leq .05$. Results of the CFAs are presented in Table 3. The first CFA showed that the six-factor structure factor was supported in these data, with all three fit indices in the excellent range. We then examined the seven-factor structure consisting of the six original CRIS subscales and the race salience subscale. The CFI and TLI values were in the acceptable range, and the RMSEA was in the excellent range for the seven-factor model. As this was not an analysis of nested models, but a test of the viability of the seven-factor model, the seven-factor structure was accepted, despite the modest decrement in the CFI and TLI values. Factor coefficients for the seven-factor model ranged from .52 to .92, and the omega estimate for the race salience scores based on the CFA coefficients was .73.

Study 2

The results of Study 1 showed that the five race salience items formed a viable race salience factor by themselves and in combination with the six CRIS subscales. The seven-factor structure including the six CRIS subscales and race salience yielded acceptable to close fit. Thus, this study's structural validity analyses provided support for an expanded version of the CRIS. Additionally, as hypothesized, race salience scores were inversely related to assimilation scores and positively correlated with the two subscales highest in racial salience—anti-White and Afrocentricity—providing some evidence of convergent validity.

The goal of Study 2 was to replicate the seven-factor CRIS structure in an independent sample. As salience may be affected by context (Sellers et al., 1997) and some researchers have found that racial identity attitudes differ across schools with different racial compositions (e.g., Cokley, 1999), participants in Study 2 were African American students attending a predominantly White institution, in contrast to the historically Black institutions from which the sample in Study 1 was drawn. The use of two samples allowed for

Table 3. Fit Indices for Expanded CRIS Scores Derived From Confirmatory Factor Analyses (WLSMV).

Model	χ^2	df	CFI	TLI	RMSEA	90% CI
Historically Black institution						
1. Original six-factor model	678.26*	390	.959	.955	.048	.042, .054
2. Expanded seven-factor model	1122.61*	539	.946	.940	.048	.042, .053
Predominantly White institution						
3. Original six-factor model	819.49*	390	.961	.957	.057	.051, .062
4. Expanded seven-factor model	1122.61*	539	.950	.944	.056	.052, .061

Note. CRIS = Cross Racial Identity Scale; WLSMV = weighted least squares robust estimator; CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation.

* $p < .001$.

an examination of the CRIS model with the race salience construct across independent samples and different educational contexts (i.e., a historically Black institution and a predominantly White institution). Hypotheses were generally the same as in Study 1: that (a) race salience scores would yield an acceptable internal consistency estimate; (b) the seven-factor model would yield acceptable fit indices, albeit a little lower than the six-factor model; and (c) race salience scores would be meaningfully correlated with assimilation, anti-White, and Afrocentricity scores. As race salience scores were not associated with miseducation and self-hatred scores in Study 1, we did not predict these associations in Study 2.

Method

Sample 2 consisted of 340 students attending a predominantly White institution. Participants in this sample had an average age of 21.3 years and were 74.6% female. Seventy-two percent of this sample reported being from middle-class households, 27% from poor or working-class households, and less than 1% from upper-middle-class or wealthy households. The average GPA for this sample was 3.2. The CRIS and the race salience items were the only measures used in the study. Data collection procedures for Study 2 are reported in detail in Worrell et al. (2011). Participants were recruited across several semesters from a single research intensive PWI with <10% African American students. The data were collected online on the university's servers, which required students to log in, so access was limited to students at that institution. Only data from the first time the survey was completed were used for students who completed the survey more than once.

Results

The descriptive statistics for Sample 2, reported in Table 4, are similar to the findings for Sample 1 in terms of patterns of means, alpha estimates, and intercorrelations. As in Sample 1, race salience scores were internally consistent, not meaningfully associated with miseducation, self-hatred, and multiculturalist-inclusive scores, but they were positively and meaningfully correlated with anti-White and Afrocentricity scores. Race salience scores were also inversely related to assimilation scores.

For the CFAs, as in Sample 1, we ran the original six-factor model first and then the seven-factor model including the race salience subscale, and the same criteria were used for interpretation. The results of the CFAs are reported in Table 3. As can be seen, the analyses were in the excellent to acceptable ranges for both the six- and seven-factor models, with the values being

Table 4. Descriptive Statistics for Scores on the Expanded CRIS From Sample 2 Attending a PWI.

Subscales	M	SD	α	95% CI ^a	1	2	3	4	5	6	7
1. PA	2.29	1.25	.85	.82, .87	—	.45	.38	-.04	-.19	-.14	-.59
2. PM	2.83	1.26	.81	.78, .84	.35	—	.35	.11	.27	-.09	-.14
3. PSH	2.40	1.40	.87	.85, .89	.29	.28	—	.36	.16	-.02	.03
4. IEAW	2.04	1.25	.88	.86, .90	.01	.09	.28	—	.51	-.35	.41
5. IA	3.04	1.32	.88	.86, .90	-.17	.20	.12	.42	—	-.02	.54
6. IMCI	5.42	1.23	.82	.79, .85	-.08	-.06	.01	-.26	.00	—	.24
7. RS	4.36	1.29	.75	.71, .79	-.43	-.10	.02	.30	.45	.22	—

Note. N = 340. CRIS = Cross Racial Identity Scale; PWI = predominantly White institution; PA = Pre-encounter Assimilation; PM = Pre-encounter Miseducation; PSY = Pre-encounter Self-Hatred; IEAW = Immersion-Emersion Anti-White; IA = Internalization Afrocentricity; IMCI = Internalization Multiculturalist Inclusive; RS = Race Salience. Correlations below the diagonal are for the observed variables and correlations above the diagonal are for latent variables obtained from Model 4 of the confirmatory factor analyses in Table 3. Correlations > .14 are significant at the .01 level.

^aConfidence intervals were calculated with SPSS syntax from Fan and Thompson (2003).

slightly lower for the seven-factor model. Factor coefficients for the seven-factor model in Sample 2 ranged from .55 to .90, and the omega internal consistency estimate for the race salience score was 80.

General Discussion

This study was conducted to examine the psychometric properties of an expanded version of the CRIS consisting of the original six subscales and a seventh subscale assessing race salience—that is, the amount of attention that African Americans pay to racial issues in their daily lives. Results from two independent samples indicated that race salience scores were internally consistent using both alpha and omega estimates, and fit indices were supportive of the seven-factor structure. These findings contribute to the already strong psychometric evidence for CRIS scores, which have been shown to be robust in adolescent and adult samples (Vandiver et al, 2002; Simmons et al., 2008; Worrell et al., 2014).

Coefficient alpha estimates for race salience scores were lower than those for the other CRIS subscales in both samples, although they were still within the acceptable range. Omega estimates were slightly higher. Thus, race salience scores were internally consistent. In the factor analyses, all of the factor coefficients for race salience scores in both samples were $> .50$, indicating moderate to strong correlations with the latent construct. Finally, in both samples, the seven-factor structure for the CRIS, which included race salience, had good to excellent fit. Although some of the fit indices for the six-factor structure were slightly better than those for the seven-factor structure, the fit coefficients for the seven-factor structure in both samples were strong and better than some fit indices for six-factor CRIS models in several former studies (e.g., Vandiver et al., 2002; Worrell & Watson, 2008). Fit indices for the seven-factor model in this study were also better than the fit indices for the CERIS-A (Worrell et al., 2019), which also includes a race salience scale.

Race Salience Associations With Other Nigrescence Attitudes

The pattern of correlations between race salience attitudes and other attitudes provided convergent and discriminant validity evidence in support of the race salience construct. Race salience scores in both samples had negative associations with assimilation scores, underlining the fact that assimilation attitudes privilege national identity over an identity tied to racial group. Thus, while assimilation attitudes are conceptualized as low in race salience (Cross & Vandiver, 2001), it seems as if they may be more appropriately

conceptualized as eschewing or avoiding a focus on racial issues. Race salience scores were positively related to anti-White and Afrocentric attitudes, supporting the contention that both of these attitudinal constructs are high in racial salience, despite the fact that anti-White is outward looking and Afrocentricity is inward looking. The correlations with Afrocentricity attitudes were the strongest, highlighting the association of these attitudes with being Black.

Contrary to the hypothesis in Study 1, miseducation and self-hatred attitudes were not meaningfully related to race salience, and this finding was replicated in Study 2. Miseducation attitudes seem to focus on race and are considered moderate in racial salience, but the lack of a relationship may relate to the fact that these attitudes are reflections of societal views; thus, miseducation attitudes may be less about race per se and more about internalizations of societal perceptions of African Americans. In the CERIS-A article (Worrell et al., 2019), miseducation attitudes were not meaningfully associated with ethnic-racial salience in the African American ($r = .14$) or Latinx ($r = .14$) subsamples; however, the correlations were higher for the Asian American ($r = .30$) and European American subsamples ($r = .29$), suggesting that the association between these two constructs may differ by ethnic-racial group. It is also worth noting that miseducation items on the CRIS invoke negative stereotypes, whereas negative items on the CERIS-A invoke stereotypes generally with valence determined by the respondent. These differences may lead to the differences in outcomes.

The lack of an association between race salience and self-hatred scores is more surprising. Self-hatred attitudes are high in racial salience, and self-hatred is the only CRIS subscale that has a consistent inverse correlation with self-esteem (Awad, 2007; Vandiver et al., 2002), supporting the contention that self-hatred is at the intersection of personal and social identity (Cross, 1991). Self-hatred attitudes are also positively correlated with depression, anxiety, phobic anxiety, and psychoticism (Worrell et al., 2011). Moreover, ethnic-racial salience scores on the CERIS-A had moderate to high associations with self-hatred in African American, Asian American, European American, and Latinx participants ($.31 \leq r \leq .57$). This association will require further study.

Multiculturalist-inclusive attitudes were also not meaningfully related to race salience as hypothesized. Although multicultural-inclusive attitudes are based on a grounding in a Black identity (Worrell & Gardner-Kitt, 2006), these attitudes also highlight the willingness to engage with individuals from other groups. It is possible that the willingness to engage African Americans and other ethnic-racial groups makes race less salient in this construct, as individuals are judged by their values and behaviors and

not by their demographic group membership. The lack of an association between multicultural-inclusive and ethnic-racial salience attitudes on the CERIS-A for all ethnic groups (Worrell et al., 2019) provides support for this hypothesis.

Limitations

There are several limitations to this study. First, the study was limited by the use of previously collected data. Thus, convergent validity analyses could only be conducted with other CRIS subscales as these were what were available in the data sets. In addition to examining the seven-factor structure in other samples that are collected specifically for this purpose, it will also be important to collect and examine the convergent validity of race salience scores with other constructs such as scores on the MIBI (Sellers et al., 1997) and the Multigroup Ethnic-Identity Scale-Revised (Phinney & Ong, 2007). As with the rest of CRIS scores, it will also be important to examine the association between race salience attitudes and correlates such as self-esteem, personality factors, and social desirability to examine divergent validity.

Conclusion and Implications

The primary contribution of this study is strong psychometric evidence in support of a seven-factor model of the CRIS, adding a race salience subscale with reliable scores to the six CRIS subscales already in the extant literature: assimilation, miseducation, self-hatred, anti-White, Afrocentricity, and multiculturalist inclusive. This finding is particularly important, given the psychometric concerns that have been reported with regard to scores on other scales assessing Black racial identity (e.g., Cokley & Vandiver, 2012; Ponterotto & Park-Taylor, 2007; Sabnani & Ponterotto, 1992; Simmons et al., 2008; Vandiver et al., 2009). Indeed, the CRIS is the only instrument with a theoretical model that has been supported by CFAs in multiple studies (Vandiver et al., 2002; Worrell et al., 2011; Worrell et al., 2014; Worrell & Watson, 2008), and the addition of a seventh subscale in this study has not broken this record.

This study's major finding—that is, psychometric support for the addition of a race salience scale to the CRIS—also raises some interesting questions for the field. CRIS scores have been found to be reliable in adolescent samples, but some of the items on the race salience subscale (e.g., looking at a candidate's voting record, reading the newspaper) seem to be activities that adults are more likely to engage in. So will race salience scores as operationalized in this study be reliable and structurally valid in adolescent samples? The CRIS

has also been used to identify generalizable nigrescence profiles in African American samples (Worrell et al., 2006), and these profiles have been found to predict outcomes in adolescent (Worrell et al., 2014) and adult (Chavez-Korell & Vandiver, 2012; Telesford et al., 2013; Whittaker & Neville, 2010) samples. To date, profiles have been based on six subscales. Will having a race salience construct yield additional nigrescence profiles that are different from ones already found? These are questions that need to be addressed in future studies. In sum, this study's findings indicate that the expanded nigrescence theory (Cross & Vandiver 2001; Worrell et al., 2001) continues to be a driver of important questions in the field of Black racial identity research.

Declaration of Conflicting Interests

The authors declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Four of the authors are coauthors on the scale being examined in the study.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Frank C. Worrell  <https://orcid.org/0000-0002-7122-527X>

References

- Awad, G. H. (2007). The role of racial identity, academic self-concept, and self-esteem in the prediction of academic outcomes for African American students. *Journal of Black Psychology, 33*(2), 188-207. <https://doi.org/10.1177/0095798407299513>
- Byrne, B. M. (2012). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. Routledge. <https://doi.org/10.4324/9780203807644>
- Chavez-Korell, S., & Vandiver, B. J. (2012). Are CRIS cluster patterns differentially associated with African American enculturation and social distance? *The Counseling Psychologist, 40*(5), 755-788. <https://doi.org/10.1177/001100011418839>
- Cokley, K. O. (1999). Reconceptualizing the impact of college racial composition on African American students' racial identity. *Journal of College Student Development, 31*(3), 235-245.
- Cokley, K. O., & Vandiver, B. J. (2012). Ethnic and racial identity. In E. M. Altmaier & J. C. Hansen (Eds.), *The Oxford handbook of counseling psychology* (pp. 291-325). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195342314.013.0011>
- Cross, W. E., Jr. (1971). Toward a psychology of Black liberation: The Negro-to-Black conversion experience. *Black World, 20*(9), 13-27.

- Cross, W. E., Jr. (1991). *Shades of Black: Diversity in African American identity*. Temple University Press.
- Cross, W. E., Jr., & Vandiver, B. J. (2001). Nigrescence theory and measurement: Introducing the Cross Racial Identity Scale (CRIS). In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (2nd ed., pp. 371-393). Sage.
- Fan, X., & Thompson, B. (2003). Confidence intervals about score reliability coefficients. In B. Thompson (Ed.), *Score reliability: Contemporary thinking on reliability issues* (pp. 69-84). Sage.
- Phagen-Smith, P. E., Vandiver, B. J., Worrell, F. C., & Cross, W. E., Jr. (2010). (Re) Examining racial identity differences across socioeconomic status, community of origin, and gender among African American college students. *Identity: An International Journal of Theory and Practice*, 10(3), 164-180. <https://doi.org/10.1080/15283488.2010.495907>
- Ferguson, C. J. (2009). An effect size primer: A guide for clinicians and researchers. *Professional Psychology: Research and Practice*, 40(5), 532-538. <https://doi.org/10.1037/a0015808>
- Gardner-Kitt, D. L., & Worrell, F. C. (2007). Measuring nigrescence attitudes in school-aged adolescents. *Journal of Adolescence*, 30(2), 187-202. <https://doi.org/10.1016/j.adolescence.2006.01.001>
- Helms, J. E. (1986). Expanding racial identity theory to cover counseling process. *Journal of Counseling Psychology*, 33(1), 62-64. <https://doi.org/10.1037/0022-0167.33.1.62>
- Hernandez, A. (2015). *Latino skin color: The role of discrimination, racial identity, and parental racial socialization on self-esteem and depression* (Publication No. 1738486244) [Doctoral dissertation, Drexel University]. ProQuest Dissertation and Theses database.
- Parham, T. A., & Helms, J. E. (1981). The influence of Black student's racial identity attitudes on preference for counselor's race. *Journal of Counseling Psychology*, 28(3), 250-258. <https://doi.org/10.1037/0022-0167.28.3.250>
- Phinney, J. S., & Ong, A. D. (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54(3), 271-261. <https://doi.org/10.1037/0022-0167.54.3.271>
- Ponterotto, J. G., & Park-Taylor, J. (2007). Racial and ethnic identity theory, measurement, and research in counseling psychology: Present status and future directions. *Journal of Counseling Psychology*, 54(3), 282-294. <https://doi.org/10.1037/0022-0167.54.3.282>
- Sabnani, H. B., & Ponterotto, J. G. (1992). Racial/ethnic minority-specific instrumentation in counseling research: A review, critique, and recommendations. *Measurement and Evaluation in Counseling and Development*, 24(4), 161-187.
- Scottham, K. M., Sellers, R. M., & Ngyên, H. X. (2008). A measure of racial identity in African American adolescents: The development of the Multidimensional Inventory of Black Identity—Teen. *Cultural Diversity & Ethnic Minority Psychology*, 14(4), 297-306. <https://doi.org/10.1037/1099-9809.14.4.297>

- Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional Inventory of Black Identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*(4), 805-815. <https://doi.org/10.1037/0022-3514.73.4.805>
- Simmons, C., Worrell, F. C., & Berry, J. M. (2008). Psychometric properties of scores on three Black racial identity scales. *Assessment, 15*(3), 259-276. <https://doi.org/10.1177/1073191108314788>
- Sue, D. W. (1978). World views and counseling. *Personnel and Guidance Journal, 56*(8), 458-462. <https://doi.org/10.1002/j.2164-4918.1978.tb05287.x>
- Sussman, J., Beaujean, A. A., Worrell, F. C., & Watson, S. (2013). An analysis of Cross Racial Identity Scale (CRIS) scores using classical test theory and item response models. *Measurement and Evaluation in Counseling and Development, 46*(2), 136-153. <https://doi.org/10.1177/0748175612468594>
- Telesford, J., Mendoza-Denton, R., & Worrell, F. C. (2013). Clusters of CRIS scores and psychological adjustment. *Cultural Diversity & Ethnic Minority Psychology, 19*(1), 86-91. <https://doi.org/10.1037/a0031254>
- Vandiver, B. J., Cross, W. E., Jr., Fhagen-Smith, P. E., Worrell, F. C., Swim, J. K., & Caldwell, L. D. (2000). *The Cross Racial Identity Scale*. College of Education, The Pennsylvania State University. <https://doi.org/10.1037/t01825-000>
- Vandiver, B. J., Cross, W. E., Jr., Worrell, F. C., & Fhagen-Smith, P. E. (2002). Validating the Cross Racial Identity Scale. *Journal of Counseling Psychology, 49*(1), 71-85. <https://doi.org/10.1037/0022-0167.49.1.71>
- Vandiver, B. J., Fhagen-Smith, P. E., Cokley, K. O., Cross, W. E., Jr., & Worrell, F. C. (2001). Cross' nigrescence model: From theory to scale to theory. *Journal of Multicultural Counseling and Development, 29*(3), 174-200. <https://doi.org/10.1002/j.2161-1912.2001.tb00516.x>
- Vandiver, B. J., & Worrell, F. C. (Eds.). (2001). Psychological nigrescence revisited: Introduction and overview [Special issue]. *Journal of Multicultural Counseling and Development, 29*(3). <https://doi.org/10.1002/j.2161-1912.2001.tb00515.x>
- Vandiver, B. J., Worrell, F. C., & Delgado-Romero, E. A. (2009). A psychometric examination of Multidimensional Inventory of Black Identity (MIBI) scores. *Assessment, 16*(4), 337-351. <https://doi.org/10.1177/1073191109341958>
- Watkins, M. W. (2018). Exploratory factor analysis: A guide to best practice. *Journal of Black Psychology, 44*(3), 219-246. <https://doi.org/10.1177/0095798418771807>
- Whittaker, V. A., & Neville, H. A. (2010). Examining the relation between racial identity attitude clusters and psychological health outcomes in African American college students. *Journal of Black Psychology, 36*(4), 383-409. <https://doi.org/10.1177/0095798409353757>
- Worrell, F. C. (2008). Nigrescence attitudes in adolescence, emerging adulthood, and adulthood. *Journal of Black Psychology, 34*(2), 156-178. <https://doi.org/10.1177/0095798408315118>
- Worrell, F. C. (2012). Forty years of Cross' nigrescence theory: From stages to profiles, from African Americans to all Americans. In J. M. Sullivan & A. M. Esmail (Eds.), *African American identity: Racial and cultural dimensions of the Black experience* (pp. 3-28). Lexington Books.

- Worrell, F. C., Andretta, J. R., & Woodland, M. H. (2014). Cross Racial Identity Scale (CRIS) scores and profiles in African American adolescents involved with the juvenile justice system. *Journal of Counseling Psychology, 61*(4), 570-580. <https://doi.org/10.1037/cou0000041>
- Worrell, F. C., Cross, W. E., Jr., & Vandiver, B. J. (2001). Nigrescence theory: Current status and challenges for the future. *Journal of Multicultural Counseling and Development, 29*(3), 201-210. <https://doi.org/10.1002/j.2161-1912.2001.tb00517.x>
- Worrell, F. C., & Gardner-Kitt, D. L. (2006). The relationship between racial and ethnic identity in Black adolescents: The Cross Racial Identity Scale (CRIS) and the Multigroup Ethnic Identity Measure (MEIM). *Identity: An International Journal of Theory and Research, 6*(4), 293-315. https://doi.org/10.1207/s1532706xid0604_1
- Worrell, F. C., & McFarlane, T. (2017). Assessing nigrescence beyond the US: Black racial identity attitudes in Jamaica. *Identity: An International Journal of Theory and Research, 17*(4), 224-238. <https://doi.org/10.1080/15283488.2017.1379904>
- Worrell, F. C., Mendoza-Denton, R., Telesford, J., Simmons, C., & Martin, J. F. (2011). Cross Racial Identity Scale (CRIS) scores: Stability and relationships with psychological adjustment. *Journal of Personality Assessment, 93*(6), 637-648. <https://doi.org/10.1080/00223891.2011.608762>
- Worrell, F. C., Mendoza-Denton, R., & Wang, A. (2019). Introducing a new assessment tool for measuring ethnic-racial identity: The Cross Ethnic-Racial Identity Scale-Adult (CERIS-A). *Assessment, 26*(3), 404-418. <https://doi.org/10.1177/1073191117698756>
- Worrell, F. C., Vandiver, B. J., & Cross, W. E., Jr. (2004). *The Cross Racial Identity Scale: Technical manual* (2nd ed.). Graduate School of Education, University of California, Berkeley.
- Worrell, F. C., Vandiver, B. J., Cross, W. C., Jr., & Fhagen, P. E. (2016). *The Cross Ethnic-Racial Identity Scale-Adult*. Graduate School of Education, University of California.
- Worrell, F. C., Vandiver, B. J., Cross, W. E., Jr., & Fhagen-Smith, P. E. (2004). The reliability and validity of Cross Racial Identity Scale (CRIS) scores in a sample of African American adults. *The Journal of Black Psychology, 30*(4), 489-505. <https://doi.org/10.1177/0095798404268281>
- Worrell, F. C., Vandiver, B. J., Schaefer, B. A., Cross, W. E., Jr., & Fhagen-Smith, P. E. (2006). Generalizing nigrescence profiles: A cluster analysis of Cross Racial Identity Scale (CRIS) scores in three independent samples. *The Counseling Psychologist, 34*(4), 519-547. <https://doi.org/10.1177/0011000005278281>
- Worrell, F. C., & Watson, S. (2008). A confirmatory factor analysis of Cross Racial Identity Scale (CRIS) scores: Testing the expanded nigrescence model. *Educational and Psychological Measurement, 68*(6), 1041-1058. <https://doi.org/10.1177/0013164408318771>