

An Examination of the Factor Structure of the Index of Race-Related Stress Among a Sample of African American Adolescents

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In the present study, the Index of Race-Related Stress (IRRS) was administered to a sample of urban African American adolescents. This instrument has been used among samples of adult and collegiate African Americans, and the purpose of the present study was to examine the factor structure of adolescent responses. The scale was modified and administered to a sample of 324 African American adolescents. The results provided empirical evidence of validity for the IRRS, particularly as a measure of race-related stress among adolescents. The measure required some modifications, which included deletion of items and rewording some questions to make them relevant for an adolescent sample. Future research should consider the assessment of race-related stress among adolescent samples to understand its association with mental and physical health.

Keywords: *African American; adolescents; factor structure; Index of Race-Related Stress*

Lazarus and Folkman (1984) defined *stress* as a situation in which a person perceives that his or her resources are exceeded resulting in psychological and psychosomatic symptoms. Anger, anxiety, and frustration can result when an individual perceives that he or she is unable to cope with the

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situation or unable to modify his or her response to the situation (Bullock & Houston, 1987; Outlaw, 1993). Currently, the Lazarus and Folkman model is the most widely used because it was the first to recognize that events are stressful when people perceive them as such. This recognition allows for the assessment of individual differences because people differ in what events they consider stressful (Slavin, Rainer, McCrary, & Gowda, 1991).

The nature and frequency of stressful events is, however, likely affected by membership in an ethnic group (Slavin et al., 1991). The definition of *race*, social groupings based on visible physical characteristics (Mack, 1968), suggests that African Americans may encounter stressful events more frequently than European Americans. Much of this stress may be attributed to racism, racial discrimination, racial prejudice, and race-related stress (Clark, Anderson, Clark, & Williams, 1999; Feagin & Eckberg, 1980; Harrell, 2000; Utsey, Ponterotto, Reynolds, & Cancelli, 2000).

Racism is defined as a system of power and privilege based on the beliefs and institutional arrangements that corroborate the superiority of certain ethnic groups and denigrate others because of certain phenotypic characteristics (Clark et al., 1999; Harrell, 2000). *Racial discrimination* entails dominant group behaviors that result in subordinate ethnic groups being treated differentially (Feagin & Eckberg, 1980). *Racial prejudice* consists of negative attitudes that some dominant group members have toward subordinate groups (Harrell, 2000). *Race-related stress* is defined as the psychological discomfort that results from a situation appraised as troubling because of racism, racial prejudice, racial discrimination, or racial isolation (Plummer & Slane, 1996).

A careful study of race-related stress, however, requires a multidimensional understanding of this construct. According to Jones (1991), there are three types of racism-related stressors: cultural, individual, and institutional. Cultural racism exists when a particular ethnic group's (usually the dominant group's) cultural values and traditions are considered superior to those of other ethnic groups (Jones, 1991). Institutional racism consists of dominant groups' negative attitudes about subordinate groups being embedded in social institutions such as the educational system and the media (Jones, 1991). Individual racism exists when dominant group members engage in behaviors intended to denigrate members of subordinate ethnic groups (Jones, 1991). Essed (1990) further articulated that collective racism exists when groups of dominant group members seek to restrict the rights of subordinate group members.

In a more recent expansion, Harrell (2000) discussed six types of racism-related stressors often experienced by African Americans. Racism-related life events consist of those events that occur infrequently such as housing

discrimination or racial profiling (Harrell, 2000). Vicarious racism experiences are those that occur to close friends, family members, and strangers (Harrell, 2000). Daily racist microstressors include the subtle and unconscious degradations that serve as daily reminders of the salience of race (Harrell, 2000). Chronic-contextual stress entails perceptions of unequal distributions of resources for African Americans collectively (Harrell, 2000). Collective experiences include perceptions of racism's effects on particular ethnic groups, such as stereotypic portrayals in the media (Harrell, 2000). Transgenerational transmission entails the history of a particular ethnic group and its relation to the dominant group in a particular society (Harrell, 2000).

The Differential Exposure Hypothesis (DEH) postulates that racism, prejudice, and discrimination are harmful to African Americans because they predispose them to higher risks of psychological disorders (Smith, 1985). Although social scientists have attempted to understand the nature and effects of racism, prejudice, and discrimination in society for decades (Allport, 1954), the breadth and complexity of racism as experienced by African Americans have not been addressed in the psychological literature (Utsey et al., 2000). Much of the empirical research assesses these phenomena and their associations with adjustment among European Americans, particularly college students (Harrell, 2000).

Several instruments have, however, been developed to assess the cognitive, affective, and behavioral effects of racism among African Americans. They include the following: (a) the Racism Reaction Scale (RRS) (C. E. Thompson, Neville, Weathers, Poston, & Atkinson, 1990), (b) the Perceived Racism Scale (PRS) (McNeilly et al., 1996), (c) the Index of Race-Related Stress (IRRS) (Utsey & Ponterotto, 1996), (d) the Racism and Life Experience Scale (RaLES) (Harrell, 1995, as cited in Utsey, 1998), (e) the Schedule of Racist Events (SRE) (Landrine & Klonoff, 1996), and (f) the Perceptions of Racism Scale (PoRS) (Green, 1995). A review and critique of all these measures are available elsewhere (see Utsey, 1998). In the present study, the IRRS was chosen because of the empirical evidence resulting from psychometric examinations among African American adults.

The IRRS is a 46-item measure of racism-related stress as experienced by African Americans. The IRRS is multidimensional in nature and consists of four subscales: cultural, institutional, individual, and collective racism (Utsey & Ponterotto, 1996). Respondents are asked to identify which events they or family members have experienced and also to indicate the impact of the experience. Internal consistency indexes for the IRRS have been reported as more than adequate, with adequate test-retest reliability coefficients (Utsey

& Ponterotto, 1996). The factor structure of the IRRS has been established via exploratory and confirmatory factor analyses. The results indicated that a four-component oblique model provided the best fit, which was consistent with the measures' theoretical origins. Furthermore, several of the subscales were significantly correlated with the subscales of the RaLES-B as evidence of concurrent validity (Utsey & Ponterotto, 1996). A brief version of the IRRS (the IRRS-B) has been developed and also exhibits evidence of adequate psychometric properties (Utsey, 1999).

The developments of these instruments have resulted in empirical assessments of racism-related effects. Perceptions of racism, discrimination, prejudice, and race-related stress have been associated with lower quality of life levels (Utsey, Chae, Brown, & Kelly, 2002), substance abuse (Neuspiel, 1996), psychological distress (J. Taylor & Turner, 2002), marital dissatisfaction (J. Taylor, 1990), anger (Krieger, Sidney, & Coakley, 1998), low self-esteem (Fernando, 1984), hypertension (Krieger, 1990), and a disinclination to maintain one's cultural heritage (Ruggiero, Taylor, & Lambert, 1996). In a recent study, Bowen-Reid and Harrell (2002) reported that perceived racist encounters and appraisal of these events were positively associated with somatic complaints (i.e., nausea and headaches) and psychological distress. Furthermore, in a study of rural African American families, mothers who reported high levels of perceived racial discrimination had elevated levels of psychological distress and less positive interactions with their children (Murry, Brown, Brody, Cutrona, & Simons, 2001). The research suggests that the effects of racism on the mental health of African Americans are harmful and should be considered by physicians and mental health practitioners who cater to African American populations. One population, however, that has been neglected in the study of the effects of racism, prejudice, discrimination, and race-related stress is African American adolescents.

Miller (1999) argued that African American adolescents' vulnerability is connected to a social environment that perpetuates discrimination and increases the risk for disorders. This may explain why urban youth are at risk for multiple internalizing and externalizing problems (Rutter, 1987). Consequently, race-related stress might operate as a risk factor for African American adolescents. *Risk factors* are conditions or variables associated with a higher likelihood of negative or socially undesirable outcomes (Jessor, Turbin, & Costa, 1998). Race-related stress might predispose African American adolescents to psychopathology during a time when they are figuring out who they are.

Erikson (1968) argued that developing a solidified identity during adolescence is crucial to the further development of the person. He further argued

that the person strives to achieve consistency between how he or she conceives himself or herself to be and how he or she perceives others to view himself or herself. As such, this task should be more involving for African American adolescents who have to reconcile what it means to be African American while experiencing negative effects as a result of being African American. According to Zayas (2001), the daily assaults of racism hinder progress toward identity achievement among adolescents of color. As such, race-related stress might operate as a risk factor for African American adolescents.

To assess the impact of race-related stress among African American adolescents, the existing instruments need to be psychometrically examined among adolescent samples. The purpose of the present study was to examine the underlying dimensions of the IRRS in a sample of urban African American adolescents. Exploratory factor analysis was used to identify the factor structure of this measure in an adolescent sample.

METHOD

PARTICIPANTS

The participants in this study were 324 urban African American adolescents ranging in age from 13 to 18. The sample was composed of 171 females (52.8%) and 153 males (47.2%) with a mean age of 15.9 ($SD = 1.1$). The sample consisted of 37 freshmen (11.4%), 86 sophomores (26.5%), 84 juniors (25.9%), and 117 seniors (36.1%).

The participants were recruited from high schools in a large northeastern city. Once approval was obtained from the principals, classrooms were identified to recruit participants. Participants participated in the study after the parental consent form was returned. Volunteers were not paid for their participation and were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct (American Psychological Association, 1992).

MEASURES

Demographic Questionnaire

All participants completed a demographic questionnaire, which requested information about their gender, age, and year in school.

Index of Race-Related Stress

The IRRS is designed to assess the stress experienced by African Americans as a result of their encounters with racism. The IRRS measures four stable constructs: individual racism, collective racism, institutional racism, and cultural racism. The *individual racism* dimension assesses personal behaviors intended to denigrate ethnic group members. The *collective racism* subscale assesses when organized groups of Whites/non-Blacks try to restrict the rights of African Americans. The *institutional racism* dimension measures racism experienced as embedded in the policies of a given institution. The *cultural racism* dimension assesses the experience in which the cultural practices of one group are lauded as superior to those of another. Previous research has indicated that the IRRS assesses interrelated yet distinct dimensions of race-related stress (Utsey & Ponterotto, 1996).

The IRRS is a Likert-type scale composed of rating items with responses ranging from 0 (“This has never happened to me”) to 4 (“Event happened and I was extremely upset”). Utsey and Ponterotto (1996) reported high internal consistency coefficients among African American adults for the IRRS: individual racism ($\alpha = .84$), collective racism ($\alpha = .74$ to $.79$), institutional racism ($\alpha = .82$ to $.85$), and cultural racism ($\alpha = .87$ to $.89$).

Evidence of concurrent validity was established with the Racism and Life Experience Scale (RaLES-B). The *self* subscale of the RaLES-B was significantly associated with the individual racism, institutional racism, and collective racism subscales (Utsey & Ponterotto, 1996). The *group* subscale was significantly associated with the cultural racism, individual racism, and institutional racism subscales (Utsey & Ponterotto, 1996). Furthermore, the IRRS global score was significantly associated with the RaLES-B global score (Utsey & Ponterotto, 1996).

Although the IRRS is a 46-item instrument, 36 items were used in the present study. Ten items were deleted because they were believed to be inappropriate for the present sample. Examples of the deleted items include “Whites/non-Black people have been apologetic about the Japanese internment, Jewish holocaust, and other violations of human rights, but would prefer to forget about slavery, Jim Crowism, and other abuses of Black people” and “You were refused an apartment or other housing; you suspect it was because you are Black.” The items were deleted for two reasons. The first example was considered too sophisticated for early adolescents (i.e., 13 to 15 years). Although it was believed that older adolescents (i.e., 16 to 18 years) might be able to answer those types of questions, the questionnaire was revised for the entire range of adolescence. The second example could not be

modified in a way to be more relevant for African American adolescents. As such, 10 items were deleted from the following subscales: collective racism (2 items), institutional racism (3 items) and cultural racism (5 items). Similarly, some of the questions were changed to make them more relevant for the experiences of most adolescents. An example of a changed item includes "You did not receive a school award [originally *promotion*] you deserved; you suspect it was because you are Black."

PROCEDURE

A set of instructions explaining the purpose of the study was read to the participants. Before the survey was administered, the subjects were given a consent form to read and sign. The primary researcher and assistants distributed the questionnaire. The participants were reminded that their participation was voluntary and that their individual results would not be reported to any school or government officials. On completion of the questionnaire, the purpose of the study was explained to the participants, and they were allowed to ask questions about the study.

RESULTS

IRRS COMPONENT STRUCTURE

Exploratory factor analysis was used to identify the underlying dimensions of the observed variables (Floyd & Widaman, 1995). The extraction method used was principal factor analysis, which is preferred for exploratory factor analysis (B. Thompson & Daniel, 1996). An initial principal factor analysis with the commonality estimates resulted in seven eigenvalues greater than 1.0 after nine iterations. Because the Kaiser-Guttman criterion (eigenvalues > 1) is considered less reliable, a scree test was used (Gorsuch, 1983). According to Bryant and Yarnold (1997), the scree test cutoff is the point at which the slope approaches zero. The results indicated that a maximum of three factors should be retained. Separately, one, two, and three component extractions were analyzed using orthogonal rotation. Orthogonal rotation assumes that the underlying factors are uncorrelated, and it is preferred for exploratory factor analyses (Floyd & Widaman, 1995; Tabachnick & Fidell, 1996).

The most interpretable of these extractions was the three-component orthogonal solution, which accounted for 36% of the variance. Typically, the

criteria for retaining factor pattern coefficients include (a) coefficients are .35 or higher and (b) factor pattern coefficients meeting the first criteria are required to be at least .15 greater than other coefficients on other factors (Bryant & Yarnold, 1997; Tabachnick & Fidell, 1996). The results indicated that four items met the first criteria but did not meet the second criteria. Consequently, these four items were not retained for further analyses. An example of a deleted item is "While on the train, bus, or other places, Whites/non-Blacks have chosen to stand up rather than sit next to you." Table 1 includes the IRRS items, means, standard deviations, factor pattern coefficients, and communalities.

Factor 1 consisted of 10 items and accounted for 13% of the variance. This factor was labeled *individual racism*, and a sample item includes "Security people have followed you while shopping in some stores." Factor 2 consisted of 13 items and accounted for 12% of the variance. It appeared that these items represented a combination of collective and institutional racism. A sample item includes "You were harmed in a crime and the police treated you as if you should just accept it because you were black." Factor 3 consisted of nine items and accounted for 11% of the variance. This factor was labeled *cultural racism*, and a sample item is "You have observed the police treat Whites/non-Blacks with more respect than they do Blacks."

INTERNAL CONSISTENCY AND SUBSCALE INTERCORRELATIONS

The Cronbach alphas for the new IRRS subscales were as follows: Factor 1 (individual racism, $\alpha = .87$), Factor 2 (collective/institutional racism, $\alpha = .84$), and Factor 3 (cultural racism, $\alpha = .82$). Pearson correlation coefficients were also calculated to assess the intercorrelations of the IRRS. Individual racism was significantly correlated with collective/institutional racism ($r = .56, p < .01$) and cultural racism ($r = .59, p < .01$). Collective/institutional racism was also significantly associated with cultural racism ($r = .41, p < .01$). These moderate correlations suggest that the revised IRRS subscales are separate yet related measures of the race-related stress experienced by African American adolescents (see Table 2).

DISCUSSION

The purpose of the present study was to assess the factor structure of the IRRS among a sample of African American adolescents. The results of the exploratory factor analysis of the modified IRRS provide empirical evidence

TABLE 1
Items, Factor Pattern Coefficients, Means, Standard Deviations,
and Communalities for the Revised Index of Race-Related Stress Scale

<i>Item</i>	<i>Factor Pattern Coefficients</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>M</i>	<i>SD</i>	<i>h²</i>
Item 1. Salespeople did not say thank you or show other forms of respect (i.e., put your things in a bag) when you shopped at some White/non-Black owned businesses.	.41	.09	.10	1.43	1.37	.28
Item 2. While shopping at a store, the salesperson thought that you couldn't afford certain items (i.e., you were directed toward the sale items).	.66	.03	-.07	1.53	1.59	.41
Item 3. You were treated with less respect than Whites and other non-Blacks while in a store, restaurant, or other type of business.	.66	-.05	.03	1.59	1.54	.43
Item 4. Whites/non-Blacks have stared at you as if you didn't belong in the same place with them, whether it was a restaurant, store, or other place of business.	.56	.01	.16	1.65	1.48	.44
Item 5. While shopping at a store or when attempting to buy something, you were treated as if you were not a serious customer or didn't have any money. ^a	.60	.13	.05	1.55	1.59	.50
Item 6. You have heard or seen other Black people wish to be White or to have White hair, lips, or eyes because they thought being Black was ugly or did not want to be Black. ^a	.58	-.07	.12	1.72	1.50	.39
Item 7. White people or other non-Blacks have treated you as if you were stupid and needed things explained to you slowly or several times. ^a	.63	.11	.04	1.44	1.55	.52
Item 8. You have been in a restaurant or other White/non-Black place where everyone was waited on before you. ^a	.59	.18	-.02	1.47	1.59	.46
Item 9. Security people have followed you while shopping in some stores. ^a	.66	-.07	.07	2.17	1.59	.39
Item 10. Whites/non-Blacks did not apologize to you for stepping on your foot or bumping into you.	.49	.13	.03	1.55	1.54	.33
Item 11. You have been threatened with physical violence by a person or group of Whites/non-Blacks.	.03	.39	-.01	0.63	1.26	.16

Item 12.	You were harmed in a crime and the police treated you as if you should just accept it because you were Black. ^a	-.01	.46	-.00	0.47	1.09	.21
Item 13.	You were passed over for an important school project although you were better at the task than the White/non-Black person given the task. ^a	.07	.51	-.00	0.70	1.22	.29
Item 14.	You have been given more schoolwork or the school projects you don't want while the White/non-Black students are given less work and the tasks you want. ^a	-.10	.63	.07	0.64	1.22	.37
Item 15.	You have been questioned about being in a White neighborhood for no reason. ^a	.06	.54	.00	0.78	1.36	.34
Item 16.	An individual or group of Whites/non-Blacks beat you up. ^a	-.15	.65	-.17	0.34	0.92	.35
Item 17.	You think you did not receive a school award you deserved because you are Black. ^a	-.07	.61	.08	0.61	1.25	.37
Item 18.	Although you were waiting in line first, you were assisted after the White/non-Black person behind you.	.32	.48	-.09	0.82	1.32	.42
Item 19.	White people have expected you to speak badly of some famous Black people (i.e., rappers, athletes, etc.) who go against what is normal. ^a	.11	.45	.21	1.04	1.41	.37
Item 20.	You called the police for help and when they arrived they treated you like a criminal.	.15	.46	.21	0.81	1.39	.32
Item 21.	You think that you have been asked to pay in advance for things like food instead of after because you are Black. ^a	.19	.38	.12	1.02	1.40	.33
Item 22.	You have held back angry feelings in the presence of Whites/non-Blacks because you were afraid they would have said you had a "chip" on your shoulder. ^a	.03	.48	.11	0.73	1.26	.30
Item 23.	When you have been around Whites/non-Blacks, you expected them to say or do something that you wouldn't like. ^a	.05	.47	.06	1.04	1.46	.27
Item 24.	You notice that crimes done by White people tend to be seen as not as bad, whereas the same crime done by a Black person is seen in a bad way and the Black person as an animal. ^a	-.13	.08	.67	2.15	1.52	.39
Item 25.	You notice that when Black people are killed by the police, the television and newspapers inform the public of the person's criminal record or other bad information about them, suggesting they got what they deserved.	-.04	.09	.65	2.40	1.43	.39

TABLE 1 (continued)

<i>Item</i>	<i>Factor Pattern Coefficients</i>					
	<i>1</i>	<i>2</i>	<i>3</i>	<i>M</i>	<i>SD</i>	<i>h²</i>
Item 26. You have observed that White kids who do violent acts are seen as “boys being boys,” while Black kids who do similar acts are wild animals.	.19	-.02	.52	2.15	1.43	.40
Item 27. You seldom hear or read anything good about Black people on radio, TV, or newspapers or in history books.	-.04	-.00	.50	1.79	1.40	.23
Item 28. You have observed the police treat Whites/non-Blacks with more respect than they do Blacks.	.05	.00	.54	1.95	1.48	.33
Item 29. You have heard reports of Whites/non-Blacks who have done crimes and in an effort to cover up their acts, they lied and said that a Black person was responsible for the crime.	-.02	.11	.51	1.98	1.62	.28
Item 30. You notice that the newspapers and TV play up stories that cast Blacks in bad ways (i.e., child abusers, rapists, muggers), and these stories are usually seen with a large picture of a Black person looking angry or disturbed.	.16	-.15	.66	2.28	1.44	.52
Item 31. You have heard bad remarks or comments about Black people spoken with little guilt by important White people. ^a	.24	-.03	.45	1.89	1.52	.40
Item 32. You have noticed that there are either no garbage, street repair, or police services in Black neighborhoods or that they do not do a good job of keeping the area clean. ^a	.19	.12	.39	1.87	1.51	.34

NOTE: Factor patterns: 1 = individual racism; 2 = collective/institutional racism; 3 = cultural racism. All items were taken from Utsey and Ponterotto (1996).

a. These items were modified from Utsey and Ponterotto (1996).

TABLE 2
Intercorrelations of the Index of Race-Related Stress Subscales

<i>Subscale</i>	<i>1</i>	<i>2</i>	<i>3</i>
Individual racism	—		
Collective/institutional racism	.56*	—	
Cultural racism	.59*	.41*	—

* $p < .01$.

for three discernible factors: individual racism, collective/institutional racism, and cultural racism. The present study also supports previous research that has indicated that the IRRS subscales assess distinct yet related dimensions of race-related stress.

The results also suggest, however, that the IRRS may require further modifications for use with African American adolescents. Four items were not retained because they failed to meet one of the criteria for retaining factor pattern coefficients. One of the common criteria for retaining items to a scale is that all items have a value of at least .15 greater than other loadings on other factors (Bryant & Yarnold, 1997). The fact that four items failed to meet this criterion indicates that these items may require further revisions for use with African American adolescents. For example, the item "You have been bothered by jokes made by Whites/non-Blacks in positions of authority (i.e., teachers and principals) and you did not say anything for fear they might have held it against you" had a factor pattern coefficient of .38 for collective/institutional racism and also had a factor pattern coefficient of .32 for individual racism. This suggests that some questions on the IRRS may require further refinement for use with an African American adolescent sample.

The results of the present study empirically suggest that the IRRS assesses race-related stress as experienced by African American adolescents. Although the adolescents' responses were not consistent with the 4-factor structure in the adult samples, the following factors were evident: individual, racism collective/institutional racism, and cultural racism. The results suggest that urban African American adolescents are able to distinguish experiences of cultural and individual racism, as assessed in the IRRS. The results of the collective/institutional dimension suggest, however, that the adolescents may not be able to distinguish experiences of these two types of race-related stress. These results may be a function of age (i.e., younger adolescents may be more inexperienced with race-related stress), but more research is necessary among this population.

The present study suggests that the effects of racism, prejudice, discrimination, and race-related stress need to be empirically assessed among African

American adolescents, particularly during a time as important as adolescence. Miller (1999) suggested that the racial discrimination present in African American adolescents' social environments increases the risk for disorders because it may predispose them to psychopathology during a time when they are discovering their identities (Erikson, 1968).

Furthermore, it has also been empirically demonstrated that the effects of race-related stress are risk factors for African American adults, given their association with physiological and psychopathological responses. The effects of racism, discrimination, and prejudice have been associated with eating problems (B. W. Thompson, 1992), high blood pressure (Krieger & Sidney, 1996), and low levels of life satisfaction (Broman, 1997; Utsey et al., 2000). More empirical research needs to be conducted on the effects of race-related stress among all African Americans, given the ubiquity of racism in the lives of African Americans (McAdoo, 1982). Skin color is another factor that needs to be considered when studying race-related stress because darker skinned African Americans are 11 times more likely to report racial discrimination than lighter skinned African Americans (Klonoff & Landrine, 2000).

There are several limitations that should be noted in the present study. One limitation concerns the selection bias among the sample that may have resulted from recruitment methods. The study sample represented a convenience sample that could be reached via the principals' approval. Given the selection bias, the results of the present study cannot be generalized to other African American adolescents in urban, rural, or suburban settings.

In addition, volunteer bias (volunteer subjects responding differently from the general population) may have affected the outcome in that participants who volunteered for the study may have differed from those who did not volunteer. Volunteers have been shown to differ on self-disclosing ability (Rosnow & Rosenthal, 1997). These characteristics may have affected the study variable, with the sample reporting lower levels of race-related stress.

The fact that the adjustment variables were based on adolescent self-reports is another limitation of the present study. Given the sensitive topic of the study, this raises the issue of social desirability. Because the present study did not have a social desirability instrument, there is no way to know whether individual variation in social desirability responses differentially affected the race-related stress variable. Past research has, however, illustrated that adolescent self-report data have shown a high level of consistency and accuracy (R. D. Taylor & Roberts, 1995).

In addition, the self-report methodology introduces recall bias in that the time lapse for remembering these events varies from adolescent to adolescent. Another limitation of the present study concerns the lack of concurrent validity of race-related stress. Although the results of the present study

provide empirical evidence of content validity, it is not certain if race-related stress is actually being assessed. Future research should include administrations of other measures of race-related stress to establish concurrent validity among African American adolescents.

Future research should also consider if demographic variables affect the experience of race-related stress. For example, does the type of school that an adolescent attends affect his or her experience of race-related stress? Future research should also consider gender differences in race-related stress among African American adolescents and if race-related stress is negatively associated with adolescent achievement and adjustment.

The present study expands the stress literature with empirical evidence of a measure of race-related stress among African American adolescents. Although research has been conducted on race-related stress among African American adults, hardly any research has been conducted among African American adolescents. This study is among the few that have begun to study the phenomenon of race-related stress exclusively among African American adolescents.

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