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Christy M. Byrd¹

Abstract

Researchers have long been interested in racial attitudes and preferences of young children with a focus on the implications of societal racism on healthy development. The doll study paradigm popularized by Clark and Clark is the most commonly used measure for children; however, researchers also have adapted paper and pencil measures and projective techniques to capture children's attitudes. This article reviews multiple measurement approaches, drawing on developmental frameworks, and argues that researchers should draw more on cognitive developmental theories in creating measures that can better capture the unique nature of ethnic minority children's racial attitudes, how they form, and implications for adjustment.

Keywords

racial identity, racial preferences, children, doll study

Researchers have long been interested in the racial attitudes and preferences of young children. The doll study paradigm popularized by K. B. Clark and Clark (1939) is the most commonly used and enduring measure for children

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as young as 3 or 4 years; however, researchers also have adapted paper-and-pencil measures and projective techniques to capture children's attitudes. This article reviews multiple measurement approaches, drawing on developmental frameworks (e.g., Alejandro-Wright, 1985; Semaj, 1980), and gender development theories (e.g., Bussey & Bandura, 1999; Martin, Ruble, & Szkrybalo, 2002), and argues that researchers should employ more developmental theories in developing measures that can better capture the unique nature of ethnic minority children's racial attitudes, how they form, and implications for adjustment.

Definitions

Racial and Ethnic Identity

Racial and ethnic identity can be defined as the significance and meaning of race and/or ethnicity in individuals' lives (Sellers, Smith, Shelton, Rowley, & Chavous, 1998). Though disputes exist on the differences between racial identity and ethnic identity (Cokley, 2007), in this article, the terms are used in accordance with the theoretical perspective on which each measure is based, and interchangeably elsewhere. This review focuses primarily on racial and ethnic identity in minority children—nevertheless, the components of identity are relevant to all children, and many of the studies reviewed include White samples.

Components of Racial/Ethnic Identity

Three components of racial/ethnic identity are salient for children: awareness, identification, and attitudes. *Awareness* or classification refers to the ability to distinguish between members of different races according to commonly accepted norms. Though race and ethnicity are socially constructed categories with phenotypical markers in addition to cultural and social markers, most studies conceptualize awareness as the ability to distinguish based on distinct physical features, predominantly skin color, as these are the features most salient to children (Ramsey & Myers, 1990). *Self-identification*, or self-labeling, refers to the ability to correctly name one's own race/ethnicity. Finally, *attitudes* refer to beliefs about the characteristics of different racial groups. Racial/ethnic identity attitudes consist of multiple dimensions, such as in-group/out-group preference, evaluation/regard, and ideology (Ashmore, Deaux, & McLaughlin-Volpe, 2004). As awareness and identification are stable by adolescence, racial identity in adolescents and adults

typically refers only to attitudes. However, because young children vary in their racial awareness and identification ability, a model of racial identity in children necessarily includes these aspects.

Children

Individuals vary in the ages at which they begin to experience the pubertal and cognitive changes associated with adolescence, including identity development. Therefore, it is difficult to pinpoint a particular age at which youth are no longer “children.” However, because much of the research on racial and ethnic identity in adolescents is conducted with youth over the ages of 13 or 14 years, this review focuses on populations aged 12 years and younger. Measures were selected if they were intentionally designed for nonadolescent populations (e.g., Children’s Black Identity Scale) or were used with children younger than 12 years.

Developmental Framework

The developmental framework guiding this article is based on several works on the development of early racial and ethnic identity: Semaj (1980), Alejandro-Wright (1985), Bernal, Knight, Garza, Ocampo, and Cota (1990), and Aboud and Doyle (1993). Additionally, I draw on social cognitive (Bandura & Bussey, 2004; Bussey & Bandura, 1999) and cognitive developmental (Martin et al., 2002, 2004) theories of gender development to elaborate the racial and ethnic identity model. Gender and race, as social identities, are similar in dimensions and the progression of milestones, though the timing of development differs between the two categories (see Martin et al., 2002). A summary of this framework is presented in Table 1.

The cognitive models of racial/ethnic identity development are based on the assumptions that children are active constructors of their social world, and that both internal and external factors are influential in development (Aboud & Doyle, 1993; Bussey & Bandura, 1999). The first step in identity development is awareness, that is, the ability to distinguish between people of different races. Semaj (1980) notes that, “classification [awareness] probably begins as early as the child becomes perceptually aware of physical differences in people” (p. 60). Alejandro-Wright (1985) reports that skin color is the primary physical characteristic that children rely on; however, other characteristics such as eye color and hair type can be important. Most young children are not able to correctly classify individuals by race until they are about 4 to 5 years old. Alejandro-Wright refers to this as the Subliminal stage of awareness.

Table 1. Developmental Sequence of Awareness, Self-identification, and Constancy

Age (Years)	Milestones
3-4	<ul style="list-style-type: none"> • Awareness of physical differences developing • Idiosyncratic classification
4-6	<ul style="list-style-type: none"> • Awareness based on physical characteristics • Consistent classification
6-8	<ul style="list-style-type: none"> • Identification develops • Preconceptual classification
8-10	<ul style="list-style-type: none"> • Awareness based on physical and biological characteristics • Some awareness of social characteristics • Conceptual classification
10-12	<ul style="list-style-type: none"> • Awareness based on physical, biological, and social characteristics • Racial constancy develops

As awareness stabilizes, so does children's ability to self-identify, and this ability is stable by age 5 to 6 years. By age 7 to 8 years, children enter the Preconceptual stage of classification when they are able to understand that racial and ethnic differences are also based on biological features (i.e., heredity). Children also show some understanding of differences based on social features such as speech patterns and lifestyle. The penultimate stage of classification is the Conceptual stage, in which children are able to understand the physical and biological dimensions of race, around age 8 years (Alejandro-Wright, 1985). Additionally, children are able to understand some social features and recognize the flexibility in racial categorization (i.e., "passing," multiracial status). It is assumed that children obtain an "adult-like" understanding of race by age 10 to 12 years, in which they are able to understand the socially constructed nature of race.

Racial constancy is the knowledge that race is stable and will not change with superficial alterations. Research on gender constancy (Martin et al., 2002) recognizes three stages: identification—the ability to discriminate; stability—understanding that gender will remain the same over time; and consistency—understanding that gender will remain the same despite superficial changes. Aboud and Doyle (1993) suggest that racial constancy is a prerequisite for self-identification, yet Semaj found that only 60% of 10-year-olds demonstrated racial constancy. Therefore, constancy appears to be an aspect of identity that develops fairly late, even after children are able to correctly identify their own race. Gender constancy, on the other hand, is stable around the age of 5 years, and some researchers suggest it is a primary

motivator of gender preferences and behaviors (e.g., Martin et al., 2002). Though its role in childhood is unclear, the establishment of racial constancy may play an important role in racial identity development in adolescence.

Racial preferences are evident in children as young as 3 or 4 years, although these preferences are not always consistent (e.g., K. B. Clark & Clark, 1939). Semaj (1980) suggests that preferences would not exist in preschoolers because of their limited awareness; however, research in gender reveals that children are paradoxically able to attend to gender stereotypes and display gender-typed behavior before they can consistently identify their own gender (Martin et al., 2002). Racial preferences are evident in preschoolers, as well. Several researchers report White preferences for minority children in preschool, with increases in in-group bias up until age 10, when preferences become more balanced (Aboud & Doyle, 1993; Semaj, 1980).

The source of preferences is not clear, although Aboud and Doyle (1993) suggest that egocentrism plays a role, and that bias is reduced over time because of a greater ability to consider out-group members' viewpoints and feelings. Furthermore, Semaj (1980) suggests that out-group preferences for minority children represent a "regurgitation" (p. 76) of social norms, which is similar to Bandura and Bussey's (2004) and Bigler and Liben's (2006) proposition that parents and peers model stereotypical preferences and behaviors long before children understand their own category membership. Bernal et al. (1990) also suggest that early ethnic behaviors are determined by family members. Nevertheless, studies have found that parents' stereotype endorsement was not associated with children's racial preferences (Aboud & Amato, 2001), which suggests that more implicit modeling may be at work. This is confirmed by a study of White preschoolers in which a White actor's nonverbal, but not verbal, behavior toward a Black target influenced the children's attitudes toward the target and an unfamiliar Black adult (Castelli, De Dea, & Nesdale, 2008). In sum, proximal adults may have an implicit impact on the development of children's preferences.

Model Limitations

The current models of identity development do not address awareness and self-identification in infants younger than 3 years, but some research suggests a limited ability to distinguish races, even in-group preferences, in 3-month-old infants (Kelly et al., 2005). Infants are able to discriminate between male and female faces as young as 9 months (Martin et al., 2002), so race awareness may also develop in infancy. Additionally, research has not tested constancy beyond the age of 10 years, which leaves a gap in current understanding.

To summarize, current models of racial and ethnic identity propose a developmental sequence in which children gradually increase in the complexity of their awareness of racial differences. Furthermore, the consistent ability to identify one's race stabilizes around school age, but an understanding of the stability of one's race may not be present until late childhood.

The Measures

The measures of racial and ethnic identity attitudes fall under three approaches: doll study, paper and pencil, and projective/qualitative. For each measure, the content, the age group with which it has been used, indicators of validity and reliability, and strengths and weaknesses of the individual measures and approaches as a whole are described. In particular, each approach is evaluated regarding its alignment with developmental theory.

The measures were located through searches in PsycInfo using the keywords *racial identity*, *ethnic identity*, *racial preferences*, *racial attitudes*, and similar terms. Age was limited with keywords (i.e., "children") or with age group search limitations. Only articles that included children younger than 12 years in the sample were included, regardless of whether they also included adolescents. For the doll study technique, the articles mentioned are foundational works, in addition to representative variations. For the paper-and-pencil measures, all articles employing the particular measure were reviewed. For the projective and qualitative measures, examples of each method are provided. Though it was impossible to review every measure and every article, this review provides considerable breadth in the range of measures available and substantial depth in several methodologies. The measures are summarized in Table 2.

Doll Study Paradigm

The procedure popularized by K. B. Clark and Clark (1939), also known as the "doll study" technique, could be seen as the standard paradigm to evaluate racial identity in children. Between 1939 and 1977, more than 30 studies were conducted using this procedure and its variations, and though fewer studies have been published more recently (Gray-Little & Hafdahl, 2000), its usage continues to the present day (e.g., Guerrero et al., 2010). The standard paradigm requires that children identify their preference for one of two or more figures, one representing the child's own race and the others representing an out-group, usually Whites.

Table 2. Measures of Racial and Ethnic Identity in Preadolescents

Measure	Citations	Dimensions	Age (Years)
Doll study Variation: Preschool Racial Attitudes Measure-II (PRAM II)	Original sources: K. B. Clark and Clark (1939, 1940, 1947, 1950) Example articles: Annis and Corenblum (1986) Gitter and Satow (1969) Gopaul-McNicol (1995) Greene (1980) Guerrero, Enesco, Lago, and Rodriquez (2010) Hraba (1972) Jordan and Hernandez-Reif (2009) Smith, Levine, Smith, Dumas, and Prinz (2009) Spencer (1982) PRAM-II Original source: Williams, Best, and Boswell (1975) Example articles: Aboud and Doyle (1995) Bagley and Young (1988) Branch and Newcombe (1986) M. L. Clark (1982) A. Clark, Hocevar, and Dembo (1980) Glover and Smith (1997) Justice, Lindsey, and Morrow (1999) Verna (1982)	Awareness Identification Attitudes	3-12 (mostly 3-6)
Multigroup Ethnic Identity Measure (MEIM)	Original source: Phinney (1992) Dandy, Durkin, McEvoy, Barber, and Houghton (2008) McHale, Whiteman, Kim, and Crouter (2007) Pegg and Plybon (2005)	Attitudes (ethnic identity achievement, affirmation and belonging, ethnic behaviors, and other-group orientation)	8-12

(continued)

Table 2. (continued)

Measure	Citations	Dimensions	Age (Years)
Children's Black Identity Scale (CBIS)	Reese, Vera, and Paikoff (1998)		
	Seaton, Scottham, and Sellers (2006)		
	Simons et al. (2002)		
	Smith et al. (2009)		
	Spencer, Icard, Harachi, Catalano, and Oxford (2000)		
	Worrell (2000)		
	Worrell and Gardner-Kitt (2006)		
Cross Racial Identity Scale (CRIS)	Original source: Belgrave et al. (1994)	Attitudes (affective, cognitive, behavioral, physical)	8-13
	Using nine items: Akbar, Chambers, and Sanders Thompson (2001)		
	Burlew et al. (2000)		
	Townsend and Belgrave (2000)		
	Townsend and Lanphier (2007)		
	Using six items: Belgrave et al. (1994)		
	Thomas, Townsend, and Belgrave (2003)		
Racial Identity Attitudes Scale (RIAS)	Original source: Vandiver et al. (2000)	Attitudes (pre-encounter, immersion-encounter, internalization)	11-12
	Gardner-Kitt and Worrell (2007)		
	Worrell and Gardner-Kitt (2006)		
Multidimensional Inventory of Black Identity (MIBI)	Original source: Parham and Helms (1985)	Attitudes (pre-encounter, encounter, immersion, internalization)	6-11
	Dunkerely and Dalenberg (1999)		
	Marshall (1995)		
Multidimensional Inventory of Black Identity (MIBI)	Original source: Sellers et al. (1998)	Attitudes (centrality, private regard, public regard)	8-11
	Rowley, Burchinal, Roberts, and Zeisel (2008)		

(continued)

Table 2. (continued)

Measure	Citations	Dimensions	Age (Years)
Twenty Statements Test	Original source: Kuhn and McPartland (1954) McRoy, Zurcher, Lauderdale, and Anderson (1982) McRoy and Zurcher (1983) as cited in Hollingsworth (1997)	Identification	At least 10
Draw-a-Person	Original source: Schofield (1976) Dutton, Singer, and Devlin (1998) Pfeffer (1984)	Awareness	6-11
Koslin Social Distance Scale	Original source: Koslin, Amarel, and Ames (1969) Katz and Zalk (1978) Verna (1981)	Attitudes	7-9
Semistructured interviews	Examples: Guerrero et al. (2010) Kerwin, Ponterotto, Jackson, and Harris (1993) Verna (1981)	Awareness, identification, attitudes	6-12
Observations	Example: Ramsey and Myers (1990)	Attitudes	3-6

A search in ISI Web of Science revealed nearly 700 citations for the four original Clark studies (K. B. Clark & Clark, 1939, 1940, 1947, 1950). Table 2 presents over a dozen example articles representing replications and variation on the procedure. The original procedure was based on work by Horowitz (1939; cited in K. B. Clark & Clark, 1939) and involved several sets of stimuli; however, the most cited version (K. B. Clark & Clark, 1947) employed two dolls, one White and one Black, matched to the gender of the child. The instructions were "Give me [the experimenter] the doll that . . ." (1) you like to play with, (2) is a nice doll, (3) looks bad, (4) is a nice color, (5) looks like a colored child, (6) looks like a Negro child, (7) looks like you. The first four questions measure racial preference; the fifth and sixth measure racial

awareness, and the final question measures racial self-identification. Children are expected to select the doll of their own race for the preference questions and to make correct identifications in the last three questions.

Multiple variations on nearly every dimension exist for this procedure. The variations have not been tested empirically, with the exception of photographs compared with drawings (Guerrero et al., 2010), but results using the variations tend to be in line with the original research (e.g., Jordan & Hernandez-Reif, 2009; for reviews, see Banks, 1976 and Cross, 1985).

Stimuli

The key difference between stimuli is usually skin color, but some studies also vary stimuli by hair type (straight or curly), eye color, and/or facial features (e.g., Gitter & Satow, 1969). In addition to dolls, the Clarks also used line drawings of Black and White children (e.g., K. B. Clark & Clark, 1939). Other studies have added or substituted line and color drawings (e.g., Spencer, 1982), cartoons (e.g., Jordan & Hernandez-Reif, 2009), watercolor paintings (e.g., Annis & Corenblum, 1986), or photographs (e.g., Guerrero et al., 2010).

Color/Race Variations

Many studies focus on Black/White comparisons, but some variations on this paradigm include additional dolls with intermediate skin tones (e.g., Jordan & Hernandez-Reif, 2009), different races (e.g., Smith et al., 2009), or of a fantastical color (e.g., green; Greene, 1980). In studies using drawings or photographs, the additional representations reflected children of ethnicities other than White or Black, such as Chinese or Native American.

Questions

A few studies have added or substituted questions or made changes in wording. For example, "Which doll would you take home if you could?" (Gopaul-McNicol, 1995) and changing the word "Negro" to "Black" in later studies. Some of the added questions tap into situational features ("And do you have a doll at home that looks like this?" Gopaul-McNicol, 1995), but most are similar to the original questions. Some studies have changed the order of the questions, for instance, randomizing them for each child (e.g., Greene, 1980).

Responses

Children are sometimes asked to give the appropriate doll to the experimenter (Hraba, 1972), point to the doll (e.g., Annis & Corenblum, 1986), or to place a photograph or drawing in a pile or box labeled with the target adjective (e.g., Aboud & Doyle, 1995).

Multiple Choice

Some authors criticized the Clarks for their forced choice format or for only offering a choice between two dolls. Therefore, other variations have used four or six dolls and/or allowed children to select no dolls (e.g., Jordan & Hernandez-Reif, 2009), more than one doll (e.g., Branch & Newcombe, 1986; Gopaul-McNicol, 1995), or to rank their choices (e.g., Greene, 1980). The additional dolls represent duplicates of the two target races or added colors.

A standardized variation on the doll study procedure is notable. The Preschool Racial Attitudes Measure-II (PRAM-II; Williams et al., 1975) presents children with 12 (short form) or 24 (long form) stories containing positive and negative adjectives (e.g., nice, kind, bad, naughty) and asks the participants to select an in-group or out-group figure in response. The measure is scored such that higher scores indicate a pro-White bias, lower scores indicate a pro-in-group bias, and scores around the midpoint indicate no preference.

The doll study procedure can be used to measure attitudes, awareness, and self-identification. Researchers primarily use the procedure with preschoolers (age 3 to 6 years) because it does not require verbal selections or reading ability, but the procedure has been used with children as old as 11 or 12 years (e.g., Semaj, 1980).

The original and subsequent doll studies have been criticized for assuming a link between racial preferences and self-esteem (Cross, 1985) as well as on methodological grounds. For instance, Baldwin (1979) pointed out several challenges to the validity of the doll study paradigm, primarily that realistic representations of African Americans were not readily available until the 1960s and that characteristics of the dolls, such as facial expression and on which side they are presented, can influence participants' choices, as can contextual factors, such as the race and sex of the interviewer. Subsequent studies have addressed these issues by including controls for order and presentation (e.g., Annis & Corenblum, 1986) and by using stimuli such as photographs without changing the basic direction of the results.

Individual researchers report reliability statistics for their particular variations (e.g., Spencer, 1982), and reliability is generally moderate to high. Studies using the PRAM-II report moderate to high split-half and test-retest reliability (e.g., Justice et al., 1999; Verna, 1982; Williams et al., 1975). One way to test reliability with this technique is to compare participants' choices over multiple trials. Studies have found that self-identification is limited in preschool (Bernal et al., 1990) and did not exceed chance levels in kindergarten and first-grade children (Annis & Corenblum, 1986). K. B. Clark and Clark (1940) found that only 40% of 3- to 5-year-olds were consistent in their preference for the in-group or out-group; another study found that 73% of children changed their preference at least once in four questions (Hraba & Grant, 1970, cited in Hraba, 1972). Hraba (1972) suggested that the inconsistency was caused by children's desire to express a preference for both groups, that is, a lack of bias. When examining the results through a developmental lens, however, the lack of consistent choices may be tied to awareness and self-identification skills, which are not stable until children are school-age (see Table 1). Therefore, the doll study paradigm may not be a valid indicator of attitudes in certain children. This issue is discussed in more detail in the conclusion.

The strengths of the doll technique are that it does not require children to verbalize their choices, and, by providing a concrete representation, the tasks do not rely on abstract thinking. A strength of the PRAM-II is that it is standardized and has been used with different of populations, allowing for comparison across studies. However, the doll study technique may have only limited utility because the procedure only measures bias and not other attitudes, such as importance or group pride (Bennett & Sani, 2004). That is, children are asked to decide whether they prefer their own race to another race, not the degree to which they feel positively or negatively about their own race. Though researchers have pointed out the fallacy of assuming that an out-group bias represents low self-esteem (Cross, 1985; Gray-Little & Hafdahl, 2000), few have questioned the assumption that an in-group bias represents positive feelings about one's own group (Ruble et al., 2004). That is, this method is unable to determine whether Black children like their group or simply feel that their group is the "lesser of two evils." Furthermore, the vast majority of studies ask minority children to compare their own race with White children, confounding in-group/out-group comparisons with status differences, so the source of preferences (society or more proximal contexts) is not clear.

When administered to children who can accurately classify and self-identify, the technique is adequate for indicating one dimension of racial identity, in-group/out-group preference. However, as a whole, the doll study technique is

of limited utility for assessing racial identity in children (Banks, 1976; McMillan, 1988).

Paper-and-Pencil Measures

The paper-and-pencil measures consist of sets of written items that children respond to individually using a Likert-type scale. Of the five measures reviewed here, one was designed specifically for children while the others are adolescent/adult measures or versions modified for children. All these scales measure racial attitudes, not awareness or self-identification. The Multigroup Ethnic Identity Measure (MEIM), Racial Identity Attitudes Scale/Cross Racial Identity Scale (RIAS/CRIS), and Multidimensional Inventory of Black Identity (MIBI) are based on distinct racial/ethnic identity theories. Summaries of those theories are beyond the scope of this article, so readers are referred to the original sources listed in Table 2.

Multigroup Ethnic Identity Measure. The MEIM is a widely used measure of adolescent ethnic identity developed by Jean Phinney (1992). The original measure contained 14 items on three subscales (i.e., the MEIM) and an additional set of items that measured other group orientation (Phinney, 1992). Other work has been conducted with a 12-item, 2-subscale measure (e.g., Dandy et al., 2008), and the revised MEIM contains 6 items on 2 subscales: exploration and commitment (Phinney & Ong, 2007), excluding the other group orientation items. Numerous studies have investigated the factor structure of the MEIM in child and adolescent samples (e.g., Dandy et al., 2008; Roberts et al., 1999; Worrell, 2000). Phinney (1992) identified one factor for ethnic identity; more recent research, and most of the studies reviewed here, favors a two-factor model. An example of an exploration item is, "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs." An example of a commitment item is, "I have a strong sense of belonging to my own ethnic group."

I located 10 articles using the MEIM with children younger than 12 years. Only 1 of the 10 studies included 8- and 9-year-olds (Reese et al., 1998), and most of the studies also included adolescents older than 12 years, which makes it difficult to assess whether the measure has differential reliability in preadolescents. Half the studies were with African American children and adolescents; the other half were with youth of multiple ethnic groups.

The studies varied in whether they used summary scores of all 12 or 14 items, or whether scores were based on two or more subscales, often subscales created through factor analysis. None of the studies were based on the six-item revised MEIM. The variation in the items selected increase the

difficulty in comparing across studies. In terms of reliability, the MEIM shows moderate to high reliability in some studies (e.g., Dandy et al., 2008; Spencer et al., 2000), but three studies with African American samples reported low reliabilities: Pegg and Plybon (2005) found an alpha of .44 for a four-item commitment scale with sixth-grade girls, and Seaton et al. (2006) found alphas of .58 for a four-item exploration scale and .54 for a three-item commitment scale with middle and high schoolers. The lowest reliabilities were reported in the study with one of the youngest samples, 8- to 12-year-olds (Reese et al., 1998). Two of the three subscales had alphas less than .50. These studies suggest that further work needs to be done to establish the reliability of the MEIM in African American children.

Convergent validity for the MEIM has been established through correlations with the Cross Racial Identity Scale in an 11- to 18-year-old African American sample (Worrell & Gardner-Kitt, 2006), and similar factor structures are evident across children and adolescents and multiple ethnic groups (Dandy et al., 2008; Spencer et al., 2000). Overall, the MEIM is associated with a strong research tradition and often demonstrates adequate reliability and validity in samples of older children. More research should be conducted with the other group orientation scale, which is conceptually similar to the in-group/out-group bias measured through the doll study technique, and more research should investigate reliability and validity with younger children (age 6 to 10 years) and African American children.

Children's Black Identity Scale. The Children's Black Identity Scale (CBIS) was developed by Faye Belgrave et al. (1994) for a substance abuse intervention. Their justification in creating the scale was that other methodologies to measure children's racial identity were too time-consuming and could not be self-administered (Belgrave et al., 1994). The scale contains six to nine items on a 3-point scale measuring affective, cognitive, behavioral, and physical aspects of racial attitudes. An example of an affective item is, "I feel good about being African American"; an example of a cognitive item is, "I believe that being Black is a good experience"; an example of a behavioral item is, "I like shopping in White stores and going places where there are mostly White people"; and an example of a physical item is, "Jamaicans with lighter skin and straight hair are more attractive than Jamaicans with darker skin and hair not so straight." In Akbar et al. (2001), the items referred to Black Jamaicans and were modified for Jamaican dialect while the original items referred to African Americans or Blacks. It is not clear why some studies used six items and some used nine.

I located six published articles using the CBIS with Black children 8 to 12 years old. Five of the six articles are affiliated with Belgrave et al.'s (1994)

intervention, which means there is little evidence of validity and reliability in other samples. The measure shows adequate reliability ($\alpha = .68$ to $.82$) in the intervention samples; however, Akbar et al. (2001) reported reliabilities of $.63$ for boys and just $.43$ for girls. The lower reliabilities may be a product of the changes in wording or represent a larger weakness. Additionally, convergent validity for the CBIS has not been established through comparisons with other measures of racial identity.

Though the CBIS includes several dimensions, it is not clear how the subscales in the CBIS are distinguished from each other—that is, both affective items such as, “I feel good about being African American” and cognitive items such as, “African Americans have many good qualities” refer to positive feelings. Furthermore, only one study (Burlaw et al., 2000) examined the scale’s factor structure, which revealed two dimensions. Nevertheless, the authors decided to combine all the items because of a higher Cronbach’s alpha. Finally, though the CBIS was designed for use with children, it is based on the same body of research as the other paper and pencil measures reviewed here—that is, racial identity in adolescents and adults (Belgrave et al., 1994). Overall, the CBIS may be useful because of its short length; however, reliability and validity have not been fully established in new samples, and the measure does not have the theoretical backing of the other pencil and paper measures reviewed here.

Cross Racial Identity Scale and Racial Identity Attitudes Scale. The CRIS and RIAS are both based on Cross’s Nigrescence model of racial identity (Cross, 1991). I located two articles using each scale. The CRIS includes six subscales based on three types of attitudes: pre-encounter (assimilation, miseducation, and self-hatred), immersion-emersion (anti-White), and internalization (Afrocentricity and multiculturalist inclusive). An example pre-encounter miseducation item is, “Blacks place more emphasis on having a good time than on hard work”; an example immersion-emersion item is, “I have a strong feeling of hatred and disdain for all White people”; an example Afrocentric internalization item is, “I see and think about things from an Afrocentric perspective.” Worrell and Gardner-Kitt (2006) and Gardner-Kitt and Worrell (2007) investigated the reliability and validity in comparison with the MEIM in African American youth aged 11 to 18 years. Each of the six subscales had high reliabilities ($.70$ to $.80$) in the middle and high school samples. Furthermore, a factor analysis revealed six factors corresponding to the six subscales. Finally, as reported earlier, the CRIS had significant correlations with the MEIM.

The RIAS is a 30-item scale with four subscales: pre-encounter, encounter, immersion, and internalization. Dunkerely and Dalenberg (1999) employed a

revised version of the RIAS with Black children aged 6 to 11 years, and found high internal consistency for the scale as a whole and moderate test-retest reliability. They also reported high reliability in a separate pilot study and face validity confirmed by experts in cross-cultural psychology. However, in violation of the theory's multidimensional framework, this study collapsed across subscales and examined the measure as one of general positive attitude toward being Black.

Marshall (1995) also revised the RIAS for use with 9- and 10-year-old African American children and reported moderate reliability ($\alpha = .67$ to $.72$) across the four subscales. They examined correlations with ethnic socialization and found no correlations with child reports; however, they did find a correlation between parent reports of socialization and child encounter attitudes, providing some support for validity. In neither study is it clear how the RIAS was revised to be more appropriate for children, and example items were not given. In summary, the CRIS and RIAS have demonstrated reliability in samples of children aged 9 years and older, yet more research needs to confirm reliability and validity in younger samples.

Multidimensional Inventory of Black Identity. The MIBI is a measure of racial identity for adolescents and adults that includes four dimensions: centrality or importance, regard, ideology, and salience. I located just one study using the MIBI with a preadolescent sample (Rowley et al., 2008). The sample included third and fifth graders, and the authors used modified versions of the centrality, private regard, and public regard scales. Only one example item was provided, for the private regard scale: "I feel close to Black people." The scales demonstrated high Cronbach's alphas and convergent validity through correlations with number of Black friends, ethnic socialization, and maternal MIBI scores. The study also found a positive relationship between centrality and expectations of discrimination, which is similar to studies with adolescents and adults in which higher centrality is associated with reporting more discrimination (e.g., Sellers, Copeland-Linder, Martin, & Lewis, 2006).

The MIBI is included in this review mainly for its illustration of useful practices: First, theoretical dimensions should be retained in measures unless there is statistical evidence to combine subscales. Some studies using the MEIM, CBIS, and RIAS all combine across subscales or use subscales inconsistently. Second, as all these measures are based on adolescent/adult measures, validity in child samples should be established through correlations with similar measures or related constructs. Finally, researchers have created a teen version of the MIBI and validated it in youth aged 12 to 16 years (Scottham, Sellers, & Nguyen, 2008). The teen version, rather than the adult version, may be more useful for extending to child samples. It may be useful to also create standardized teen or child versions of the MEIM, CRIS, and RIAS.

Looking across the pencil-and-paper measures as a whole, the measures provide advantages over the doll study paradigm because they can be administered to large groups in a short period of time. Another strength is that some of the measures include items referring to behavior, which may be a more concrete way to assess attitudes. Furthermore, they measure multiple dimensions of identity, rather than just in-group/out-group preference. Interestingly, only the other group orientation scale of the MEIM is analogous to the preference measured by the doll study paradigm, but only a few studies used this scale.

In terms of establishing reliability and validity, the majority of the studies located were with Black children, so it is not clear how well the measures perform with other ethnic minorities. Also, most of the studies had samples of 10- to 12 year-olds, so validity and reliability with children younger than 10 years remains to be seen. It may not be possible to use these measures with preschoolers because of the reading involved and the abstractness of some of the concepts (e.g., “a strong sense of belonging”).

When looking at these measures through a developmental lens, a great concern is that all these measures were adapted from adult or adolescent measures. As adolescence is the time when children reach formal operations and increase their ability to think abstractly, these measures, even when the wording is altered, may rely on a level of abstractness that younger children do not grasp. Though many of the measures showed adequate reliability and validity, procedures such as cognitive pretesting (e.g., Karabenick et al., 2007) should be employed to assess children’s understanding and the differences in their understanding from adolescents.

Projective and Qualitative Measures

The measures in this category have been used less frequently than the doll study paradigm or paper and pencil measures. They represent a range of alternative methodologies and are not all-inclusive. All are forms of other measures adapted to measure racial identity or interpreted as measuring identity, and at least one empirical example of each is presented.

Twenty Statements Test. The Twenty Statements Test is a measure of self-concept that asks participants to respond to the question, “Who am I?” 20 times. In two studies using this measure (McRoy et al., 1982; McRoy & Zurcher, 1983 as cited in Hollingsworth, 1997), researchers counted the number of times the participants, adopted Black children at least 10 years old, described their racial background in a particular way (i.e., “White,” “Black,” or “mixed”). The authors interpreted the differences in references as indicative of race and adoptive status consciousness, that is, identification. Some advantages are that the test can be used with preschool children in addition to

older children, and that it does not force children to respond in a predetermined way. A limitation is that it can only assess identification (in young children) or salience of race in the self-concept, not attitudes or preferences.

Draw-a-Person. The Draw-a-Person test is a projective measure of self-concept. In two studies using this measure, children were given a sheet of paper and a box of crayons and asked to draw a person (Schofield, 1978) or to draw themselves (Dutton et al., 1998). In the Schofield study, children were given a standard set of crayons while the later study (Dutton et al., 1998) provided children with a set of multicultural crayons, representing a greater variety of skin tones. The drawings are scored as if they measure racial awareness, and specifically self-identification. Though this measure can indicate youth's tendency to refer to race (salience) or the centrality of race to the self-concept, the measure does not directly indicate attitudes about race. Similar to the Twenty Statements Test, this measure can be used with children of any age; however, the conclusions that can be drawn are limited, and the selection of materials (i.e., crayons) may influence the results.

Koslin Social Distance Scale. In this task, Verna (1981) presented children with a series of figures on either the left or right margin of wide sheet of paper. The figures varied by sex and race (i.e., a Black boy, a White boy, a Black girl, and a White girl), and there were 16 figures in total. During each trial, children are given another figure they are told represents themselves (a self-figure) and asked to place it on the page. The measure is scored by calculating the average distance the self-figure is placed from each target figure. Verna (1981) reported a split-half reliability of .87 with a sample of 225 White 9-year-olds. This measure is useful because it allows for free response, can be used with children of any age, and can indicate attitudes. Compared with the doll study paradigm, this task places less demand on young children's verbal abilities (Koslin et al., 1969).

Semistructured interviews. Although not a standardized procedure, semistructured interviews can be used with children of any age to elicit information on their awareness, self-identification, and attitudes. For example, Kerwin et al. (1993) used semistructured interviews with Black/White biracial children aged 6 to 15 years to examine their racial awareness, family racial identification, and use of interracial labels. Some of the emergent themes were others asking (or not asking) about the children's racial background and the pressure to identify with one race. Other examples of using interviews include giving children a target stimulus, such as a photograph of Black and White children, and asking them to describe what they see (Guerrero et al., 2010) or asking, "What does it mean to be a person like this?" (Verna, 1981). The descriptions can indicate salience of race and awareness of racial categories.

Observations. Observations may be useful not only for determining how children's expressed preferences relate to their behavior but can be used to assess children's actual preferences in day-to-day behavior. For example, Ramsey and Myers (1990) conducted forty 10-second observations of Black and White preschoolers over a period of 4 months. The children were scored for the race and gender of their playmate(s). This method is useful because behavior can be an outcome in itself, with direct implications for friendship selection and behavior toward children of other races. A disadvantage is that the outcomes, like choice of playmates, may be constrained by the social environment, such as a lack of diversity in a classroom, and may not reflect what children would choose in ideal circumstances.

A strength of these qualitative and projective approaches is that they do not require children to respond directly to questions about their racial group. They also avoid items that may be too abstract. However, these approaches are primarily useful for determining identification and may be less reliable as a way to measure attitudes. For instance, describing oneself as "Black" does not in itself indicate one's feelings about being Black or what meaning one places in that label (Ruble et al., 2004). Also, because these measures have not been widely used, studies demonstrating reliability and validity in diverse samples of children are not available.

From a developmental lens, these approaches do not make as strong assumptions about children's ability to self-identify or the meaning of their responses. For example, a Black child placing a self-figure closer to a White figure than a Black figure could indicate that the child likes Whites more than Blacks, an affective response, or that the child associates status with Whites. Additional variations, such as changing the stimulus to a high-status White, such as a school principal, may reveal differences that could better represent children's attitudes.

At this point, it is important to note that the doll study paradigm is itself a projective measure. However, in the past 70 years, the meaning of those choices has come to be interpreted in standard ways. Therefore, this final group of measures can compensate for a major limitation in the doll study paradigm because each measure does not have a history of being linked in a particular way to racial identity attitudes.

Discussion

Summary and Conclusions

This review examined measures of racial and ethnic identity in preadolescents in three categories: doll study paradigm, paper and pencil, and projective

and qualitative. The doll study paradigm captures just one aspect of attitudes, and inconsistency in responses undermines its validity. The pencil-and-paper measures represent alternatives to the doll study method that are easy to administer and show good reliability. However, these measures have generally not been used with children under the age of 8 years and have not been fully validated for use with children. The qualitative and projective measures can be used with children of all ages, yet only a few studies have employed them.

Some issues of validity are apparent across all the measures. Inconsistency in demonstrating awareness, as frequently found in doll studies with preschool children, could suggest a lack of appropriate skills for the task. Some researchers screen for general classification ability (e.g., Bernal et al., 1990; Ramsey & Myers, 1990), yet most studies analyze the scores of children who can correctly identify their own race with the scores of those who cannot. Just as testing a child on math skills that they have not been taught provides little meaningful information, asking self-identification and preference questions of children without understanding of racial categories begs for misinterpretation (also see Carter, Detine-Carter, & Benson, 1980).

Additionally, we are faced with the paradox that children may demonstrate preferences before they can identify their own race. This finding is similar to findings in gender development, and some researchers explain the effect by the presence of external reinforcement for bias (Bussey & Bandura, 2004), so it is likely that preschool preferences in the absence of self-identification are the results of learned association. Evidence for this in racial identity development is lacking, however—in fact, one study found that knowledge of racial stereotypes was not associated with racial preferences in 6- to 9-year-old African American children (Burnett & Sisson, 1995). Nevertheless, young children do not yet have labels that can link group characteristics to the self, so such preferences may have little bearing on the self-concept (Bigler & Liben, 2006). Some could argue that children have direct experiences of race even at a young age, so real, meaningful preferences may have developed. Yet with children growing up in persistently segregated neighborhoods (Lewis Mumford Center, 2001), it is questionable whether young children have enough contact with people of different races to form their own opinions. Few children live in gender-segregated worlds, though, so it is possible that gender preferences are based on actual experiences. It is important to note, also, that gender self-identification develops 2 to 3 years earlier than racial self-identification (Martin et al., 2002), possibly because race is less salient in preschool years. Annis and Corenblum (1986) suggest interactions

with out-group members are important for prompting correct self-identification, and this is likely true for attitudes, as well.

Another issue across measures is constancy—the understanding that race cannot change. Even after identification and awareness are stable, preferences may not have the same impact on a child without constancy as a child with constancy. For example, an adolescent may feel that society does not value his race, and this may lead to negative feelings about his own race because he knows that he, as a member of that race, will always be associated with the negative images of his group. A child who has not achieved racial constancy may also perceive that society does not value his race. However, if he believes that he can change his race, then that belief may not necessarily lead to negative feelings about his current race. It may be that the measures are more predictive for youth who have achieved constancy than those who have not, so research should investigate constancy as a moderator of racial identity attitudes.

Finally, instability in preferences requires empirical research into the meanings of these preferences and how they predict current behaviors and later preferences. Is it that children who change their answers are truly neutral or trying to express a lack of bias, as Hraba (1972) suggested? Researchers have not found links between expressed bias and behaviors such as choosing other-race playmates (Gray-Little & Hafdahl, 2000; Greene, 1980; Quintana, 1998; for an exception see Justice et al., 1999), which, along with the other issues raised, suggests researchers using doll studies need more consideration of the meaning of racial preferences in very young children.

The qualitative and projective methods are valuable to examine because they illustrate how narrow researchers have been in their approach to the study of racial and ethnic identity in children. Despite recurring critiques (e.g., Baldwin, 1979; Burnett & Sisson, 1995; Spencer, 1982), the doll study paradigm remains the primary technique for assessing racial identity in young children. Unfortunately, this measure is flawed, and not enough work has been done in connecting preschool preferences to later behaviors and attitudes. Just one longitudinal study, Smith et al. (2009), has followed preferences from kindergarten through third grade. They assessed racial attitudes in African American children using a version of the doll test through second grade, and the MEIM in third grade. The study correlated third-grade racial identity with cross-sectional academic and behavioral outcomes, but the researchers did not correlate earlier racial preferences with third-grade outcomes. Interestingly, in this study, third-grade MEIM scores were *not* significantly correlated with kindergarten and first-grade doll study scores, and had weak correlations with second-grade scores ($r = .11$ and marginally significant

in girls, $r = .15$ in boys). The lack of correlation could indicate that the doll study paradigm and MEIM are measuring different aspects of identity—the researchers assumed that the doll study paradigm measured something similar to what they referred to as Belonging on the MEIM, when the other group orientation scale may have been more appropriate. The lack of correlation could also indicate that early preferences are not very meaningful for future outcomes, including feelings of belonging to one's ethnic group. In either case, this study represents the dangers of unexamined assumptions in the study of racial and ethnic identity in children.

Suggestions for Future Directions

Several important suggestions can be made in light of this review. A preliminary suggestion is that researchers begin to control for cognitive development in studies of racial and ethnic identity. Studies with preschoolers can screen for identification and awareness ability, and studies with older children can control for constancy beliefs. Accounting for a child's level of cognitive development may be important in understanding the implications of their preferences.

A related recommendation is that longitudinal studies, using the same methodology across time points, should be conducted to examine how preferences change and how they relate to future outcomes. The primary studies advancing the theory of racial identity development in children (i.e., Bernal et al., 1990; Semaj, 1980) are cross-sectional and do not follow youth into adolescence. It is important to confirm existing models of identity development with longitudinal studies.

Also, because race constancy is established so late in childhood, it is important to develop nuanced measures that can track changing beliefs through childhood and into adolescence. This review did not include measures of constancy, but the developmental model outlined in the beginning of the article illustrates its potential importance.

Most important, the theory of racial and ethnic identity development needs to be expanded and updated. Compared with gender development theory (Bussey & Bandura, 1999; Martin et al., 2002), the current theory of racial identity development is little more than a description of developmental milestones. Racial identity theory needs to be updated with information about causal mechanisms and consequences for attitudes, memory, behavior, and social relations. For instance, in gender development theory (Martin et al., 2002), gender schemas are presumed to be central in children's attention and selection of playmates and toys, and experimental research supports the role

of stereotype knowledge in memory and behavior. Furthermore, children are expected to participate in gender-typed behavior because of a motivation to become competent in their gender role. Racial and ethnic identity theory can borrow much from gender development theory; however, it will also need to attend to the differences in the development of gender and race. For instance, why does racial awareness develop later than gender awareness? Are children who lack race constancy motivated to learn about their racial group in the same way that children with constancy are?

These questions cannot be answered until racial and ethnic identity researchers critically examine the basic assumption that has guided research in this area so far: *that racial preferences in childhood are meaningful, even for children who cannot reliably distinguish between races or identify their own race*. Current research and developmental theory does not support this assumption, and the measures currently in use may be ill-equipped to provide research that can address this assumption without substantial revision and reinterpretation. Some researchers have focused on developing theories of prejudice in children (e.g., Aboud & Amato, 2001; Bigler & Liben, 2006)—however, these theories are based on the assumption that prejudice exists in young children, an assumption that is questionable because of the methodology on which it is based. In conclusion, all the measures described here could possibly be used with young children. The question is what assumptions will researchers make when they use these measures and how are those assumptions aligned with what is known about how children think?

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