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TEACHER RATINGS OF PROBLEM BEHAVIORS: EXAMINING RACIAL BIAS IN  
AN ONLINE STUDY

by

Isaac Woods, Jr.

A Thesis

Submitted in in Partial Fulfillment of the  
Requirements for the Degree of Master  
of Science

Major: Psychology

The University of Memphis

May, 2015

## **Dedication**

I dedicate this thesis to my family, friends, Bull City, and Mr. McDonald who awakened my interest in race relations and social justice.

Lastly, I dedicate this to my mom. “Mama taught me everything, I’m her day and sun...” – Quavo of the Migos

## **Abstract**

Woods, Isaac Lee. Psychology M.S. The University of Memphis. May, 2015.  
Teacher Ratings of Problem Behaviors: Examining Racial Bias in an Online Study.  
Major Professor Dr. Randy Floyd.

After decades of advancement in education equality, a disproportional number of United States racial minority students are placed in special education. One possible cause is the bias that exists in teachers' referral and rating of behaviors for special education. This study investigated the effect that the student's race has on teachers' referrals for special education and resulting assessments. In an online-study, the race of an African American student, Asian American student, and European American student were manipulated in a vignette of a hypothetical child. Participants read one of three vignettes and completed a comprehensive rating scale and a 7-item questionnaire. No racial bias in ratings of internalizing behaviors, externalizing behaviors, referral for special education, likelihood of post-secondary education, quality of home life, and academic functioning were found in this specific study. Psychologists should continue to measure and evaluate the role of race and culture on the disproportionality.

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Teacher Ratings of Problem Behaviors: Examining Racial Bias in an Online Study

## **Background of Racial Equality in Education**

Since the *Brown v. Board* (1954) of Education Supreme Court ruling mandated desegregation in public schools, there has been an increasing amount of attention on social justice in education. Shortly after public schools were desegregated, Clark's (1965) publication of *Dark Ghetto* revealed the effect that racial stereotypes have on racial minority students. Essentially, Clark (1965) suggested that long-term exposure to negative stereotypes or prejudiced attitudes could adversely affect the personality of racial minority students. Despite the decision of *Brown v. Board* (1954) occurring decades ago, students from racial minority groups were still subjected to inequalities in the classroom setting.

In the late 1960s and 1970s, racial inequalities in education were highlighted by the disproportionate representation of minority students in special education. Dunn's (1968) pioneering article criticized the special education field; more specifically, it identified the disproportionate representation of students from racial and ethnic groups in special education. Mercer (1973) accentuated the problem of disproportionality in special education classrooms in Riverside, California; she found that Mexican American and African American students were being overrepresented in the mental retardation eligibility category. The *Larry P. v. Riles* (1979) case highlighted the disproportional representation of African American students in special education and called for the need of fair and nondiscriminatory psychological and educational evaluations. By the mid-1970s, the federal government became involved in the assessment and evaluation of students for special education, when Public Law 94- 142 (PL 94-142): Education for All Handicapped Act, which included six principles; one established procedures for

nondiscriminatory evaluations. Shortly after PL 94- 142 established nondiscriminatory evaluations, The System of Multicultural Pluralistic Assessment (SOMPA) was developed, with the intention of creating a nonbiased method for evaluating children of ethnic and language minority by assessing the whole student (Lewis & Mercer, 1978). The SOMPA was specifically meant as a counter for the bias that may occur in the intelligence tests and their norms; this effort was intended to promote more accurate placements for special education.

Further advancement to promote awareness and response to the disproportionality was set forth by the federal government. Individuals with Disabilities Education Act (IDEA; 1997) included provisions for state and local levels requiring that if there was evidence of disproportionality, states needed to review and revise policies, practices, and procedures to correct problems of mislabeling and dropouts. In 2004, IDEA mandated the use of research-based interventions and response-to-intervention in special education. Furthermore, No Child Left Behind (2002) emphasized that all diverse groups of learners should meet the same standard for proficiency set for academic achievement.

Despite the advancements made in education since *Brown v. Board* (1954) up to No Child Left Behind, the disproportional representation of minority students in special education continues. Research has also examined the disproportional representation of students from low socioeconomic status (SES) backgrounds and who belong to a racial or ethnic minority groups in special education (O'Connor & Fernandez, 2006). Several methods have been used to measure the representation of students in special education. The relative risk ratio is commonly used to measure the representation of racial groups in education by expressing the rate at which a disability occurs in a group. Essentially, a



relative risk ratio is the risk of an event relative to exposure. For example, a person exposed to a disease is 5.0% (5 times) more likely to develop a disease than a person not exposed. A ratio of 1.0% is seen as an equal representation for the minority group; any ratio that is above 1.0% is an overrepresentation, and any representation below 1.0% is an underrepresentation (Coutinho & Oswald, 2004). The Children's Defense Fund (2010) indicated that the relative risk ratio for the special education eligibility category of Intellectual Disability was 1.9% for African Americans, 1.1% for Native Americans, 0.9% for European Americans, 0.8% for Hispanics, and 0.6% for Asian Americans. The relative risk ratios for Emotional Disturbance was 1.4% for African Americans, 1.1% for Native Americans, 0.9% for European Americans, 0.5% for Hispanics, and 0.2% for Asian Americans. Finally, the relative risk ratios for Learning Disabilities were 6.3% for African Americans, 7% for Native Americans, 5.3% for European Americans, 5.5% for Hispanic Americans, and 1.9% for Asian Americans.

Recent disproportional representation in special education is due to a myriad of factors. Sullivan et al. (2009) outlined the various causes of disproportionality; one core explanation is that the disproportionality represents a systematic problem of inequity, discrimination, and marginalization in society. A majority of the special education literature is focused on the disproportionality in high-incidence disabilities like Intellectual Disability, Learning Disability, and Emotional Disturbance. These are disabilities for which the teacher's judgment is needed for an evaluation and, in many situations, an initial referral. Sullivan et al. asserted that disproportionality is a result of issues with institutionalization considerations, family/communal considerations, academic considerations, and societal bias. Institutional considerations are manifested in

systematic inequalities that contribute to disproportional resources and funding for students. Cultural considerations for racial minority families and communities also contribute to disproportionality due to the variability in academic support, resources, and other opportunities for the racial or ethnic minority children to learn outside of the school setting. Disproportionality can also be due to scholastic differences in school readiness, early academic abilities, and achievements. Finally, bias in referrals for special education, assessment, observations, and placement in practice by professionals and cultural representation in the context inside the school setting may contribute to disproportionality (Sullivan et al.). Although some of these factors cannot be improved in the context of the classroom, factors like the bias that educators have may manifest in the disproportionality.

### **The Teacher's Role in Special Education Placement**

The disproportionality of students in special education has no single cause; however, another possible explanation is the role that teachers have in the referral and assessment of students. The referral and assessment processes for special education has improved during the past several decades to include multiple informants, improved assessment procedures, and instruments, but disproportionality still exist. Prior to any evaluation for special education services, a referral request for a psychoeducational evaluation is made. The referral concern is often based on the student's academic struggles, problem behaviors, or both. Even though parents can refer their children for special education, the majority of referrals are from teachers (U.S. Commission on Civil Rights, 2009). Several studies have found that many teachers make their special education referral decisions based on the extent to which they consider a student to be

unteachable (Harry & Anderson, 1995; Kunjufu, 1985). For example, Bahr, Fuchs, Stecker, and Fuchs (1991) found that teachers referred a higher percentage of African American students rated to be unteachable than European American students rated to be unteachable. The teacher also serves as an informant for a variety of assessment measures in the psychoeducational evaluation. A teacher's background and previous experiences should not affect their rating of students, regardless of the student's race. However, as Townsend (1979) argued, professionals' conception of mental illness are influenced by racial stereotypes, and as a result, differences in assessment may be due to teacher's different expectations of normative behavior.

Response-to-intervention (RtI) has been encouraged by IDEA (2004) to provide students with both academic and social behavioral interventions. The RtI for behavioral intervention is a multi-tiered system that is used to monitor the progress of students who are receiving intervention in the tiered system. The first tier in RtI includes universal interventions in the form of standard classroom instruction and discipline practices that apply to all students. A common universal intervention might include behavioral charts, warnings or reprimand. The teacher can then make a referral based on the initial screening and strategies used in tier one. The second tier includes short-term and minimally invasive interventions for an at-risk student similar to a token economy, behavioral check-ins, slight modification to instructions, and daily behavioral report cards. The teacher's data marking and judgments of behavior are used to evaluate the effectiveness of the interventions and if a further evaluation is needed. The third tier includes intensive individual interventions that may be implemented as part of special education placements. For example, a student could possibly be moved into a more

restrictive learning environment. For tier three a more extensive evaluation is completed by professionals and the teacher is relied on to complete instruments and measures for ratings of the child's behavior for special education placement. School suspensions are not directly a part of the RtI approach nor is it encouraged, but they are also used by schools to manage behavioral problems. Data collected on suspension records reveal that African American students are 3 to 4 times more likely to be suspended for behavioral issues and 2 to 3 times more likely to be given in-school suspension than European American students (Hinojosa, 2008).

### **Racial Bias Among Teachers**

Several researchers have tried to explain the bias that exists in teachers' perceptions of students. One of the earliest and most significant explanations offered for such bias was by Hilliard (1980). Hilliard's critique on special education suggested that bias comes from educators perceived cultural differences of minority students as indicative of deficiencies because they are not normal for typical students. Fifteen years later, in a well-cited article, Harry and Anderson (1995) affirmed Hilliard's assertion that teachers perceive differences displayed by African American students as deficits. Furthermore, Harry and Anderson recommended that teachers should recognize the talents possessed by African American students to prevent teachers' deficient thinking. Deficient thinking may have been easily accepted because of the correlation of race with socio-economic status and educational attainment. Although poverty is not a disability and does not warrant special education placement, most students from poor homes have mastered the developmental childhood tasks and learned the values and social practices of their homes and community but often have not learned ways to use language in the

school setting to the extent of their middle-income peers (Harry & Klingner, 2007). This pattern, in conjunction with poor scholastic instruction provided during children's early years, can contribute to low achievement; however, school personnel seldom examine the school context of having poor classroom climate to encourage learning or lack of effective instruction. Frisby (2013) suggested that teachers who are continually exposed to poverty among racial groups and disparities in education, and teachers who have sympathetic beliefs towards minority students might perceive minorities as perpetual victims of an unjust society. The lack of recognition of the school context combined with the continual exposure to disparities among racial and ethnic groups can allow some teachers to become vulnerable to the deficit model of thinking or be less critical of the students' positive talents.

The most widely accepted source of bias is associated with faulty attributions. Weiner's attribution theory (1990) centers around judgments on three categories. The first category is locus of control. Locus of control has two causes that explain the attribution of an individual. They can be internal causes that are about the person or external causes that are about the factors outside of the person's control. The second category is controllability. In this category, the cause is either controlled by the person or not controlled by the person. Attributions related to controllability are a strong predictor of how the person was treated by others (Reyna, 2000). The final category is stability. Stability implies that the cause is stable, lasting for a long time or short amount of time. To some extent, Weiner's attribution bias is present in every individual.

Attribution biases may help explain how teachers can easily succumb to the deficit-thinking model by attributing the failures of a student to his race and SES

membership or to the lack of motivation for academic achievement. Contrary to the deficit-thinking model, the attribution model can also explain how a teacher can attribute the success of a student to their internal drive or the external support of having an affluent family.

The Attribution Bias Context (ABC) model (De Los Reyes & Kazdin, 2005) addresses reasons for informant biases that exist in child psychological ratings. The ABC model proposes that different informants (parents, teachers, or students) have discrepant perspectives on whether the student's behaviors are severe enough for treatment. The perspective of an observer is the problem existing within the student and the goal of rating a student is to gain more information about the student's challenging behavior or emotions. The ABC model implies that the teachers' perspective guides them when they are rating problem behaviors. If the problem is believed to be in the student, then the student's demographic characteristics would be considered.

### **Stereotypes and the Perception of Students**

The racial stereotype of minority students may influence the way that teachers judge and treat students (Guttman & Bar-Tal, 1982; Wineburg, 1987). These stereotypes may have a different effect on students based on their race. Clark (1939) and the Supreme Court decision in *Brown v. Board* (1954) suggested that minority groups are negatively impacted by social policies, segregation, and racism in the school setting. Despite achievements in equality and education, the perception of African Americans is generally negative. These perceptions are more commonly seen in the overrepresentation of law-breakers in the media and television news (Dixon & Linz, 2000). There are also negative stereotypes in the educational setting. In reference to academic abilities of African

American students, stereotypes suggest that they all have inferior academic abilities across all areas compared to Asian Americans and European Americans (Bobo, 2001; Steele, 1997; Steel & Aronson, 1995). Regardless of group differences on tests scores, the performance of collective groups does not generalize to individual students within said group. Stereotypes are not limited to intellectual and academic performance. In a more recent study, teachers' stereotypes of African American students were disobedient, aggressive, overactive, and displaying other traits that could be viewed as disruptive behaviors in a school setting (Chang & Demyan, 2007).

In contrast to the negative stereotypes of African Americans, the Asian American student has been slated as the "model minority" with more positive stereotypes in American culture. Research has revealed that society perceives Asian Americans as being intelligent (Sue & Kitano, 1973), cooperative or nonrebellious (Borresen, 1982), and law-abiding (Rushton, 1991). The views of Asian Americans in society have spilled over into teachers' stereotypes in the classroom. Research has shown that teachers view Asian American students as cooperative, self-controlled, perfectionist, well-behaved, and academically successful compared to their European American peers (Chang & Sue, 2003; Chang, Morrissey, & Koplewicz, 1995). In a more recent study that compared teacher's stereotypes of Asian American students to African American and European American students, Chang and Demyan (2007) found evidence of a positive Asian American stereotype that is consistent to their model minority status and showed that the racial stereotypes did not vary depending on the teacher's race. This may suggest that the popularity of the model minority status is a widely accepted stereotype, even by teachers that are Asian Americans.

Careful consideration of the perception that society has for European American students is needed to understand the stereotypes of minority students. Blanchett (2006) and similar scholars have suggested that the disproportionate representation in special education is partially due to White privilege and racism. Blanchett (2006) asserted that educators see European Americans as the norm, and as a result, African American and other minority students are compared primarily to European Americans. The construction of White privilege in school settings was noted by Alexander (2010) who provided a description of how public school classrooms and school teachers embody European American values. Alexander (2010) concluded that the lack of understanding of African American culture and the acceptance of stereotypical characterizations of African Americans in conjunction with the lack of a cultural responsive curriculum throughout the school year, all maintained the status quo of perpetuating the norm of European American middle-class culture and values. As a result, when African American students struggle or resist assimilation to the classroom environment, the deficit model and White privilege allow teachers to assume that the deficit to assimilate to the norm is chiefly within the student. Under Weiner's attribution theory (1990), this is a possible flaw in attributing the difference to the individual's lack of control and that because of the internal source of the deficit the student's classroom struggles will remain stable over time. Although educators recognized that European Americans might have a perceived privilege compared to minority groups, training to promote understanding of White privilege and multicultural awareness have not been successful. Even after training to expose cultural differences and help rid cultural bias, most European American teachers deny bias exists (DiAngelo & Sensoy, 2010; Vaught & Castagno, 2008). European



American students seem to be less affected by stereotypes than minority groups in the educational setting because they are considered the normative group, who avoid negative consequences from White privilege and school classrooms that endorse European American values.

### **Stereotypes Impact on Teachers and Students**

A large body of research demonstrates how students are negatively impacted by the stereotypes that teachers have about them. Clark's *Dark Ghetto* (1965) and his assertion that African American students are negatively impacted by stereotypes of their teachers has been the foundation for research on racist stereotypes, attitudes, and even expectations in the educational setting (Chang & Sue, 2003; Stevens, 1981). More recently, Moore (2002) suggested that African American teachers hold higher expectations for African American students than European American teachers do for African American students. This interaction was also seen when specifically examining women teachers. In a study, African American women teachers were more sensitive to the African American students' needs, whereas European American women teachers were least sensitive (Taylor, Gunter, & Slate, 2001). Furthermore, teachers' prejudice and bias were found in the decision to refer a student for special education and were more severe for boys (Andrews, Wisniewski & Mulick, 1997). Finally, Elhoweris, Mutua, Alskeikh, and Holloway (2005) presented the evidence for the teacher bias in evaluations for giftedness. Despite identical descriptions of students, teachers were less likely to refer a student for gifted programs if they believed the student was African American, instead of a European American student or Asian American student (Elhoweris et al., 2005).

There is considerable evidence that the teacher's stereotype of a group has a direct effect on how the teacher treats, judges, and interacts with the students.

Students may also be impacted indirectly by teachers' stereotypes of minority groups. Cheryan and Bodenhausen (2000) found that priming positive stereotypes of a group could (negatively) influence the performance of Asian Americans. In comparison, Steele and Aronson (1995) examined the effect that priming negative stereotypes can negatively influence African American students. They found such priming negatively influenced their performance. These findings suggest that regardless of the positive or negative association of stereotypes, students can be adversely impacted by increasing awareness of a stereotype exists. Yee (1992) came to the conclusion that Asian Americans' cultural emphasis on academic achievement compounded by higher teacher expectations may increase anxiety and stress in students. These expectations and stereotypes can have long-time effects on students. In the same vein, since the 1960s, researchers have romanticized the evidence from Rosenthal and Jacobson (1968) that expectations of others can contribute to a self-fulfilling prophecy that can increase rates of psychopathology and problem behavior for African Americans. African American and Asian American students are both vulnerable to stereotypes due to their minority status.

### **Prior Research Related to this Study**

Prior research has focused on the biases that exist in teachers for African American and European American students. Several methods such as in vivo studies and analog studies were used to examine teacher bias. In vivo studies have had teachers rate the students in their classrooms, whereas analog studies simulated the teacher-student interaction and control for other factors. The earliest analog studies by DeMeis and

Turner (1978) surveyed 68 European American, female elementary school teachers after they listened to audiotapes of students accompanied with a photograph of either an African American or European American student. Teachers listened to African American and European American fifth-grade students who were recorded responding to a question about their favorite TV shows, and teachers rated their personality, quality of responses, current academic ability, and future academic achievement. On measures of student personality, quality of response, academic ability, and future academic achievement, teachers rated African American students significantly lower than European American students. DeMeis and Turner (1978) suggested that this difference was due to the dialect differences between the African American students and the European American students. This suggestion was supported by later research indicating that some of the bias is because of the use of “Ebonics” that is commonly used by most African American students and associated with negative stereotypes in academics because of the slight differences when compared to standard English (Fairchild & Edwards-Evans, 1990; Seymour, Abdulkarim, & Johnson, 1999).

In addition to research examining academic achievement, research has also examined teachers’ bias in rating externalizing behaviors for students from different races and SES backgrounds. For example, Stevens (1981) had 27 school teachers, 24 school psychologists, and 3 parents from middle SES class backgrounds rate the hyperactivity of six fictitious elementary age students who were African American, European American, and Mexican American boys said to be from high, middle, or low SES backgrounds. Stevens found that students who appeared to be African American and were said to be from lower SES backgrounds were rated as displaying more hyperactivity by teachers

than students who appeared to be European American and who were said to be from middle backgrounds. Stevens explained that teachers have different expectations based on the racial identification of the student and that these expectations can influence their attributions and subsequent ratings. Based on the results from this study, Stevens concluded that the race or SES of the student being rated attributed to the severity of the ratings for hyperactivity. One of the limitations in this study was that it had a small sample of teachers, parents, and school psychologists.

More recent research has challenged Stevens's (1981) findings by examining teachers' ratings of a student's behavior when considering students' race and SES as factors. For example, in a highly controlled study, Pigott and Cowen's (2000) asked teachers to provide ratings for four African American students and four European American students using two students from each gender per racial group. They found that the race of the student was the strongest determinant of African American and European American teachers' judgments across all measures employed.

Epstein et al. (2005) suggested that there were nonbiased ratings for African American students and European American students diagnosed with ADHD. Their findings were that teachers who made classroom observations, did not find any differences that suggested bias in their rating of the students; instead, they provided evidence that the difference in rating students resulted from the observation of actual different behaviors among the students. In this study, the researchers completed observations of the students in the classroom setting and then had the teacher complete a rating of ADHD on the same student to determine if the difference in ratings were due to a bias by the teacher or the student's behavior. This finding was unexpected when

compared to prior research by Stevens (1981). Epstein et al.'s (2005) findings were limited because they could not control for the interaction between the teacher and student.

Previous research has examined teachers' bias in rating externalizing behaviors for students from different races and SES without controlling for the teacher and student relationship. Chang and Sue (2003) have simulated and controlled the student's behavior and teacher-student interaction by using vignettes and manipulating the race of said student by using photographs. In their study, they used a sample of 197 teachers from 160 schools in California. The study employed a mixed-model design of a 3 (race of student African American, Asian American, and European American) x 3 (problem-type undercontrolled, overcontrolled, and normal) in a combined between-subjects and within-subject design that included the interaction between race and problem type in each of the 6 blocks. The hypothetical student's behavior was assessed using a questionnaire developed for the study to assess 6 dimensions: (a) severity of the behavior problem, (b) the likelihood that the respondent would refer the student for different services or interventions, (c) perceptions regarding the quality of the student's family life, (d) perceptions regarding academic performance, and (f) perceived causes of behavior and causal attributions. Chang and Sue (2003) found race was significant for each problem type. Although, no bias was found in the rating of African American students, their results suggested that the ratings of Asian American students were susceptible to teacher's stereotypes, when using non-referenced rating forms and focused primarily on aggressive and anxious behaviors.

## **Purpose of the Study**

The goal of this study is to determine if a student's race has an effect on the ratings of their school-related problems, referral for special education, and perceptions of home life and expectations of academic abilities and academic potential. The proposed study attempts to replicate aspects of the Chang and Sue (2003) study with the addition of a comprehensive norm-referenced teacher rating form to measure externalizing and internalizing behavior from a sample of African American and European American teachers. The independent variable is the race of the hypothetical student (African American, Asian American, and European American), and the dependent variables are teachers' ratings of the hypothetical students' externalizing problems, internalizing problems, likeliness of referral, and perceptions of and expectations for the hypothetical students (African American, Asian American, and European American). The study will be an analog study to control for the teacher-student interaction that has influenced results in vivo studies like Pigott and Cowen (2000) and Epstein et al. (2005). Based on previous studies (Chang & Sue, 2003; Pigott & Cowen, 2000; Stevens, 1981), the hypothesis is that the student's race will result in different ratings of school-related problems, referral for special education, and perceptions and expectations.

## **Method**

### **Participants**

A total of 190 participants consented to participate in the study. Only 101 participants (53.16%), however, completed the study. Half of the participants (46.84 %) dropped out or failed to complete the study once the measures producing the dependent

variables were presented. Four participants (2.11%) did not meet inclusionary requirements for this study because they identified their race as something other than African American or European American.

Percentages and frequencies for participants who completed the study ( $N = 94$ ) and those who did not ( $N = 96$ ) are in Table 1 (Six participants from the final sample omitted one question when completing the survey, but these cases were included among those who completed the study). There were no statistically significant differences found in the demographic characteristics of participants who did not complete the study and participants who were included in the final study. No meaningful comparisons of participants across racial groups or the type of school in which they taught were possible due to the small number of African American participants and those who taught in private and charter schools ( $N < 5$ ; Tabachnick & Fidell, 2013).

All participants who completed this study indicated that they are teachers or have had experience as a teacher. Characteristics about the sample can be found in both Tables 1 and 2. This sample includes 86 (91.49%) European American teachers, 7 (7.45%) African American teachers, and 1 (1.06%) Biracial: African American and European American teacher. The average age of participants was 44.72 ( $SD = 11.53$ ) years. Of those who completed the study, 85 (90.42%) identified as women. Teachers reported teaching, on average, for 16.65 ( $SD = 10.56$ ) years, and they rated, on average, their exposure to ethnic minority children in their classrooms as a 5.87 ( $SD = 7.64$ ) on a 9-point scale (with higher scores indicating more exposure). Teachers reported working in a variety in settings--with 23 (24.20%) teaching in an urban setting, 37 (38.90%) teaching in a rural setting, and 35 (36.80%) teaching in a suburban setting. The majority reported

being employed at a public school ( $N = 88$ ; 93.60%), whereas a few reported being employed at a private school ( $n = 2$ ; 2.10%) or a charter school ( $n = 3$ ; 3.20%). As evident in Table 3, the majority of the participants were from Maryland ( $n = 35$ ) and Ohio ( $n = 25$ ). Six participants were from Pennsylvania ( $n = 6$ ), the remainder of the 19 states had less than three participants represented.

## **Materials**

**Demographic questionnaire.** The demographics form (see Appendix B) requested information about participants' age, gender, racial/ethnic background, teaching background/experience, and highest level of education; the percentage of racial or ethnic minority students at their school; and geographic information.

**Vignettes.** Participants read a vignette that described the behaviors of a hypothetical student and completed three questions about the demographics of the student and one question about the content in the vignette (see Appendix G).

Descriptions of the student's behavior in the vignette were derived from the behavior problem scales of the Achenbach System of Empirically Based Assessment Teacher Report Form Ages 6-18 (ASEBA- TRF; Achenbach & Rescorla, 2001). Initially, to manipulate the independent variable of race/ethnicity, the first sentence of the vignette described the student's race/ethnicity as African American, Asian American, or European American. In addition, the student's name was manipulated to reinforce the students race/ethnicity (and strengthen the independent variable) after completing an online pilot study with 68 participants. In this pilot study, participants read each vignette and completed a rating scale after doing so; results revealed no statistically significant differences in rating scale scores across vignettes. Additionally, in reaction to these



results, a comprehension check including two true/false items and two open-ended items were added to the study to reinforce the independent variable and grade.

The student's name in the vignette was selected to represent his race/ethnicity. Based on U.S. Census Bureau data (2000), the most common first name for males in each racial/ethnic group (that was not one of the top 10 most common first names for males for the other two racial/ethnic groups) and the most ethnically distinct last name for each racial/ethnic group were used throughout the vignette. *Jayden Washington* was used for the African American student, *Ryan Zhang* was used for the Asian American student, and *Connor Yoder* was used for the European American student. The remainder of the description of the student is consistent throughout all vignettes.

The vignettes were modified based on feedback from a second online pilot study with 95 participants. They were asked to read a vignette and evaluate the readability of terms and phrases from the vignette by answering three questions rated on a 9-point Likert scale and providing text. Alterations were made to the vignettes from the feedback from participants and digression of the investigator to make the student seem more realistic (see Appendix F).

After the names of the students were removed from the vignettes, a text analysis using Microsoft Word produced a Flesch-Kincaid Reading Ease score 64.7 and a Flesch-Kincaid grade level of 8.4. With the exception of the names of the students, each vignette contained a character count of 11,573; a syllable count of 498; a word count of 337; and a sentence count of 20. Each vignette contained 4.7 characters per word; 1.5 syllables per word; and 16.9 words per sentence.

**Photos of boys associated with each vignette.** Before the first and last names associated with each racial/ethnic group were varied across vignettes to make the independent variable more salient, a pilot study was completed using three stock photos of an African American boy, an Asian American boy, and European American boy from istockphoto.com (see Appendix F). All three boys were wearing a backpack, smiling, and standing against a white background. Participants in the pilot study rated the attractiveness and age of the students in the three photos. Ratings of attractiveness were statistically significantly different across photos,  $F(2, 85) = 5.68, p = .005$ . The Asian American boy ( $M = 7.48, SD = 1.544$ ) was rated higher in attractiveness than both the African American boy ( $M = 7.43, SD = 1.53$ ) and the European American boy ( $M = 7.28, SD = 1.57$ ). Ratings of age were also statistically significantly different,  $F(2, 85) = 129.15, p < .001$ . The European American boy ( $M = 8.27, SD = 1.20$ ) was rated older than both the African American boy ( $M = 8.26, SD = 1.20$ ) and the Asian American boy ( $M = 7.64, SD = 1.30$ ). Based on these results, these images were removed from the study to avoid the hypothetical student's appearance influencing scores and producing a confound.

**Behavioral rating form.** The ASEBA- TRF (6-18; Achenbach & Rescorla, 2001) is a well-validated, widely used teacher rating scale targeting student and adolescent behavior problems. Validity evidence for the ASEBA-TRF (6-18) has shown that all items discriminated significantly between demographically matched referred and nonreferred children (Achenbach & Rescorla, 2001). The ASEBA-TRF (6-18) has also shown evidence of a significant association with similar assessment scales, instruments, and diagnostic criteria (Achenbach & Rescorla, 2001). In accordance with test security

and copyright laws, a site license was obtained for the online republication of 400 copies of the ASEBA-TRF (6-18) for use in this study.

The ASEBA-TRF (6-18; Achenbach & Rescorla, 2001) contains 113 items that teachers rate on a 3-point scale; teachers rated how likely each statement is true of the student or adolescent being rated. The 113 items contribute to the Internalizing Problems and Externalizing Problems scales. The Internalizing Problems scale is composed of the Emotionally Reactive, Anxious/Depressed, Withdrawn, and Somatic Complaints syndromes. The Externalizing Problems scale is composed of Rule-Breaking Behavior and Aggression syndromes. The internal consistency reliability of the Internalizing Problems scale was reported to be .90, and the Externalizing Problems scale was reported to be .95 (Achenbach & Rescorla, 2001). *T* scores for Internalizing Problems and Externalizing Problems based on boys aged 6-11 were analyzed.

**Informal questionnaire.** Participant completed a brief questionnaire (see Appendix H) after the ASEBA TRF (6-18; Achenbach & Rescorla, 2001). The questionnaire was adapted from the Chang and Sue (2003) study; it covers three dimensions: (a) the likelihood that the respondent would refer the student for different services or interventions, (b) perceptions regarding the quality of the student's home life, and (c) perceptions regarding academic performance and ability. These questions were rated on a 9-point Likert scale ranging from least to greatest (*Not Likely to Very Likely*, *Very Poor/Low to Very Good/High*, and *Very Poor Quality to Very Good Quality*), one yes/no question concerning referral was also included. After reading the vignette and completing the questionnaire, the teachers in the first online pilot study answered three questions concerning the design and construction of the questionnaire that were adapted

from Chang and Sue (2003) (see Appendix F). One question addressed difficulty in reading and understanding the content for the questionnaire, and the other two questions were open-ended questions focusing on terms, vocabulary, or phrases that could be altered for better clarity (see Appendix D). In addition, the questionnaire was altered to eliminate questions concerning the construction of the study and to change the question concerning referral from a yes/no question to a scale item. Finally, two items were added to evaluate the validity of the process associated with reading the vignette and completing the rating scale. In particular, these two items were designed to detect if participants were selecting responses at random (see Appendix H).

## **Procedures**

**Recruitment.** Teachers from 34 different state and local affiliates of National Educators Association (NEA) were targeted for recruitment. States in the North, Northeast, South, and West were identified in an effort to have an even distribution of geographical representations, following the national sampling plan employed by a recently published cognitive abilities test battery (Naglieri & Goldstein, 2014). Those states with the highest population for each region were targeted. After these states were identified, a general invitation to participate in the study (see Appendix I) was first sent to the managers of professional listservs and officers serving state and local affiliates of the NEA. A phone call was made to these organizations if there was no response to the email. When these managers or officers agreed to assist in the study, they distributed the invitations (see Appendix E) to NEA members via listserv posts and emails. Invitations asked teachers to participate in a study examining the assessment instruments used to rate school-age student's problem behaviors.

Invitations were distributed during six time periods from September 2014 to March 2015. Each time period allowed for at least a week from the time the last participant from a particular time cycle was completed before the next cycle of invitations were sent. Participants had 7 days to complete the study once the invitation was accepted; after 7 days of being open, response opportunities were closed.

Due to the lack of diversity among participants who had responded to the invitations before January 2015, additional efforts were undertaken to recruit African American teachers. From January 2015 to March 2015, an affiliated organization of NEA called the National Alliance of Black School Educators (NABSE) was contacted. All state-level (23) and local-level NABSE (70+) organizations were contacted in the exact same manner as described in the previous paragraphs.

**Consent and inclusion.** First, participants gave consent and were provided a downloadable link for the consent form (see Appendix A), which explained privacy, confidentiality, rights, and withdrawing from the study. Then, participants completed the demographic form (see Appendix B). From this point on, only participants who identified as African American or European American were allowed to participate in the remainder of the study.

**Experimental conditions.** Participants were randomly assigned to one of three conditions. All conditions required them to listen to and read along with a recording of the vignette (see Appendix G) about the hypothetical student that included descriptions of the student's demographic information and school-related problems. Then, they were required to answer three questions about the student's demographic information and one question about the content of the vignette. Participants then completed the ASEBA-TRF

(6-18; Achenbach & Rescorla, 2001), followed by the 7-item questionnaire, which included two validity items and five items about the student (see Appendix H). An audio link was provided for participants to listen to the vignette. The audio for the link was in English (American) and provided in a female voice.

## **Results**

### **Completion Rate**

As reported in the Participants section, 94 teacher participants were randomly assigned to one of three conditions associated with the African American, Asian American, or European American student in the vignette. Of the 94 completed cases, 34 were in the African American student condition (36.20%), 33 were in the Asian American student condition (35.10%), and 27 were in the European American student condition (28.70%).

### **Demographic Characteristics**

Demographic information for participants by condition is summarized and displayed in Table 2. No significant relation was found between treatment condition and age,  $F(2, 90) = 0.179, p = .837, \chi^2 = .004$ ; between treatment condition and gender,  $\chi^2(2, N = 94) = 0.746$ ; between treatment condition and years of experience as a teacher,  $F(2, 90) = 0.274, p = 0.764, \chi^2 = 0.006$ ; between treatment condition and teaching in a urban, suburban, or rural setting,  $\chi^2(4, N = 93) = 0.739$ ; and between treatment condition and teacher's current school public, private, or charter  $\chi^2(4, N = 93) = 0.567$ .

### **Validity Check**

All participants completed the validity items, and across all participants, three responses were incorrect. The associated three participants failed to properly identify the

independent variable, student's race (i.e., "Not enough info: European-American could be just about anything", "Unknown", and "Not specified"). These participants had been assigned to the European American condition and were removed from the study.

### **Data Screening and Tests of Assumptions by Condition**

Data screening analyses were completed for the final sample of 94 participants. Data were screened for inclusionary criteria, missing data, outliers, distributional properties, and assumptions of statistical tests according to recommendations from Tabachnick and Fidell (2012).

As recommended by Achenbach and Rescorla (2001), ASEBA- TRF (6-18) protocols with 8 or more missing item responses were interpreted with caution, and protocols with 20 or more missing item responses were considered invalid. Thus, 3 participants from the original 190 were dropped because of 20 or more missing item responses and because they failed to complete the other dependent variables. Another 4 participants who completed the dependent variables except for the ASEBA-TRF were excluded from analyses involving the ASEBA-TRF. All remaining participants had fewer than 8 missing item responses.

One univariate outlier ( $z > 3.0$ :  $z = 4.06$ ) in the Asian American condition was changed to the second highest score for that condition to reduce the influence that score had on the dependent variable. Skewness and kurtosis values for each condition were in the acceptable range for Internalizing Problems and Externalizing Problems *T* scores (skewness values below 2.0 and kurtosis value below 3.0; Tabachnick & Fidell, (2012). Levene's test of homogeneity of variance demonstrated that data for Internalizing

Problems and Externalizing Problems by each condition were within acceptable limits. Additionally, the dependent variables were not strongly correlated with each other. Linearity was assessed for all continuous covariates through scatterplots using fit lines by conditions; there were no indications of curvilinear relations. Homogeneity of regression was not violated for covariates.

### **Dependent Variables**

Of the 90 participants who correctly completed the validity items and who omitted fewer than 8 items on the ASEBA-TRF (6-18; Achenbach & Rescorla, 2001), 33 were in the African American student condition (36.67%), 30 were in the Asian American student condition (33.33%), and 27 were in the European American student condition (30.00%). Again, there were no significant differences across groups, as reported in Table 2. Table 4 displays descriptive statistics for all dependent variables by condition. An a priori alpha level of .05 was employed for all tests of statistical significance.

**Internalizing and externalizing problems.** One-way independent samples ANOVAs were conducted to evaluate the effects of the student's race in the vignette on ratings of internalizing behaviors and externalizing problems, as measured by the ASEBA-TRF (6-18; Achenbach & Rescorla, 2001). There was no statistically significant effect of student's race on Internalizing Problems,  $F(2, 87) = 3.096, p = .07, \eta^2 = 0.067$ . In the same vein, there was no statistically significant effect of student's race on Externalizing Problems,  $F(2, 87) = 1.08, p = .34, \eta^2 = 0.025$ .

**Perceptions of student.** A one-way independent samples ANOVA was conducted to explore the effects of student's race in the vignette on ratings of quality of



home life, current academic functioning, likelihood of post-secondary education, and referral for special education. There was a statistically significant effect of student's race on ratings of quality of home life,  $F(2, 88) = 3.63, p = .03, \eta^2 = .076$ . Tukey post-hoc tests indicated that scores from the African American student condition ( $M = 3.88, SD = 1.16$ ) was statistically significantly lower than scores from the European American student condition ( $M = 4.65, SD = 1.26$ ), but no other statistically significant differences were evident when compared to the Asian American student ( $M = 4.33, SD = 0.92$ ). With correction to the alpha level to control for family-wise error, the quality of home life is not statistically significant. There was no significant relation found between condition and ratings of current academic functioning,  $F(2, 91) = 0.410, p = .67, \eta^2 = 0.009$ ; ratings of likelihood of post-secondary education,  $F(2, 91) = 1.24, p = .30, \eta^2 = 0.026$ ; and referral for special education,  $F(2, 94) = .787, p = .60, \eta^2 = 0.017$ .

**Teacher demographic characteristics covariates.** In order to test if any characteristics of the teacher participants covaried with dependent variables, a one-way independent samples ANCOVA was conducted with participants' demographic information used as covariates, student race as the independent variable, and Internalizing Problems, Externalizing Problems, current academic functioning, likelihood of post-secondary education, quality of home life, and referral as the dependent variables. As evident in Tables 5-10, there was no significant effect of student race on any dependent variable after controlling for teachers' age, gender, years of teaching experience, exposure to minority students, and school setting.

## Discussion

The purpose of this study was to examine the effects that a student's race has on ratings of problem behaviors related to referral and evaluation for special education. To investigate the research questions, teachers were assigned to one of three conditions, and they rated an African American, Asian American, or European American student's internalizing behaviors and externalizing behaviors, and their perceptions of the student's home life, academic functioning, and potential. Lastly, participants were asked if they would refer the student for an evaluation for special education eligibility. The main finding for this study evinces that there is no racial bias among teachers when rating students' internalizing behaviors, externalizing behaviors, academic functioning, likelihood of post-secondary education, and endorsement for special education evaluation. Only one minor, significant difference was revealed when teachers rated the quality of home life for the African American student, which was statistically lower than that of the European American student. With correction to the alpha level to control for family-wise error, the quality of home life is not statistically significant. Overall, this study confirmed the null hypothesis for all dependent variables, except for quality of home life. These findings contribute to a body of literature of bias in teacher ratings of student behavior.

Findings from this study provide evidence that there is no teacher bias affecting their ratings of students, but the overall body of research for bias in teacher ratings is mixed. Findings from this study align with some of the previous literature suggesting that the race of the student does not affect teachers' ratings (Epstein et al., 2005; Hosterman, DuPaul, & Jitendra, 2008; Pigott & Cown, 2000); however, findings did not align with other literature that suggests teacher bias (Chang & Sue, 2003; de Ramirez

& Shapiro, 2005; Stevens, 1981). The inconsistency across studies may occur due to method, sample, or criterion difference between culture and ethnicity. A comprehensive review, which considered method, sample, and criterion difference between culture and ethnicity, by Mason, Gunersel, and Ney (2014) of 13 studies of teacher bias that focused on the role of ethnic bias and culture bias. These 13 studies employed methods of direct observations, videos, and scripted vignettes. They defined ethnic bias as effects on teachers' ratings of student behavior due to the ethnicity of the rater, the rated student, or an interaction. Culture bias was defined as systemic error due to differences in the rater's cultural expectations and beliefs.

This study contributes to the mixed evidence for bias among teachers due to the student's ethnicity. Mason et al. (2014) found that, when positive ethnic stereotypes for students were violated, there was evidence of ethnic bias in teachers rating behaviors more harshly. For example, Chang and Sue (2003) did not find any bias in ratings of African American students or European American students, but they did find bias in ratings of Asian American students' externalizing behaviors. Unlike the current study, Chang and Sue (2003) employed specific problem-types (e.g., undercontrolled, overcontrolled, and normal) for their vignettes, which clearly violated the model minority stereotype of Asian American students. Their results are inconsistent with findings from this present study. Thus, ethnic bias for Asian American students may have been found in this study if a vignette was constructed to reflect more severe externalizing problems, instead of a myriad of internalizing and externalizing problems.

The review by Mason et al. (2014) concluded that there was evidence that cultural bias exists among teachers. Most importantly, they identified the de Ramirez and

Shapiro's (2005) study as providing evidence of ethnic bias that was better explained by cultural bias when ratings were of Hispanic students and European American students. Hispanic students and teachers were beyond the scope of the current study, but de Ramirez and Shapiro discovered that acculturation can be attributed to the ethnic bias, which suggests that it is not racial or ethnic differences between teacher and students but the cultural bias of the teacher that influences ratings of students. The current study and many previous studies before it (Chang & Sue, 2003; Epstein et al. 2005; Hosterman et al., 2008; Pigott & Cown 2000; Stevens, 1981) failed to assess the role of culture when examining teachers' bias.

### **Limitations**

Due to the design and method of this study, careful consideration should be given when interpreting results. The independent variables for this study were manipulated through changing the name of the boy described in the vignette and changing reference to his race. Pictures of the boy in the vignette were obtained to provide a visual representation of the independent variables, but results from pilot studies indicated that their use would introduce confounds. A visual representation of the independent variable might have enhanced the salience of the independent variables. This study also used the independent variables in a vignette to control for various confounds; however, the artificial nature of this technique reduces the ecological validity of this study. Although the study provides a description of the student, in vivo designs allow for actual observations of a student's academic abilities and behavior.

About half of the participants who started the study declined to participate once the ASEBA-TRF (6-18; Achenbach & Rescorla, 2001) was presented. Although, there

was no difference between variables measured those who completed the study and those who did not, this high dropout rate limited the sample size and indicates that the participants are not likely to be representative of the targeted population as a whole; thus, resulting in low power for some of the statistical procedures. In addition, despite controlled sampling practices and securing more participants from different geographical regions than any previous study of its type, the generalizability of this study is limited because participants were primarily from three states (Ohio, Maryland, and Pennsylvania), and none of these states are located in the Western United States.

### **Future Directions**

The challenges of conducting research on racial attitudes and biases present numerous external challenges—from Institutional Review Board approval to recruitment and anonymity. However, the design of such studies in the context of teachers and students should not be limited. Future studies should focus on more standardized methods to examine the effects of teachers' race on ratings of students' behaviors. De Ramirez and Shapiro (2005) offered some of the most rigorous standards for this line of research by controlling for the interaction of the teacher and student, providing videos to manipulate the race of the student, and to observable behaviors. Pigott and Cowen (2000) also employed one of the strongest in vivo controlled studies by selecting four students from the same class with similar demographic characteristics except for a male and a female for each race (African American and European American) were rated. These rigorous methods for examining the racial and ethnic match should be further employed in future studies. Previous studies, including the present study, failed to analyze the role of culture. More cultural factors such as acculturation, SES, country of origin, cultural identity,

education, religious affiliation, and linguistic differences should be explored as possible sources of bias. Studies like de Ramirez and Shapiro (2005) and Pigott and Cowen (2000) can help clarify the mixed evidence racial bias in teachers' ratings of students by examining what specific cultural factors cause bias in ratings. Advancing forward rigorous methods and examining the role of culture should be explored to clarify the evidence for racial or ethnic bias among teachers.

### **Implications**

Teachers' ratings scales are designed and developed to be one piece of a complex evaluation for special education. Teachers are not the only informants needed to report ratings of a student's behavior. Therefore, any bias among teachers should not be viewed as the singular cause for disproportionality. The present study contributes to an existing body of knowledge on racial bias among teachers. Ratings for each student did not provide any statistical difference for problem behaviors, academic functioning, referral, and chances of post-secondary education for a young child; however, results from this study can be interpreted as minimally supporting a deficit-thinking model. There was a small difference in the rating of the home life for the African American student compared to the European American student. A possible conclusion from this difference is that teachers from this study attributed the African American student's challenging behavior to his home life instead of the class environment, thus causing no difference among conditions for ratings of behavior, perceptions of his academic functioning, chances of post-secondary education, and referral. Another possible conclusion can be best explained using the Attributional Bias Context (ABC) model (de Los Reyes & Kazdin, 2005). The ABC model is a conceptual framework to help understand discrepancies from

informants. According to this model, a teacher will likely attribute a problem to the student's disposition; essentially, they see the problem being within the student. Thus, teachers will collect information that tends to help better understand the student's problem behaviors and emotions versus looking at the effects of context. This model implies that, although the African American student's home life was perceived as lower quality than his Asian American and European American peers, there were no significant findings among the other dependent variables because teachers believed that the problem was within the child not his home-life. Despite teachers perceiving the home life African American students as being worse than Asian American students or European American students, quality of home life does significantly influence the ratings of students' behaviors and academics.

Findings are still mixed among other studies. Several studies used pre-service teachers, but studies have included actual teachers in their sample like this one. No study has explored this research question in an online format, which has more anonymity. The results of this study should not imply that there is no bias among teacher; instead, it contributes to a body of evidence that has mixed findings.

School psychologists and teachers should not rule out the possibility that bias exists among teachers based on this study because of limitations. Designs that include individual cases and a larger sample size would add to the literature of bias among. However, this study should provide confidence that when standardized instruments are used on students from various racial backgrounds, the probability that the source of any bias is solely due to racial difference among students is unlikely. Investigations of racial difference and informant bias using the ABC model ( de Los Reyes & Kazdin, 2005) and

standardized differences scores, as recommended by de Los Reyes and Kazdin (2004), and several other factors should be considered to provide greater implications for bias among teachers.



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## Appendix A: List of Tables

Table 1  
*Attempted vs. Completed Demographic Comparisons*

Characteristic	Attempted	Completed	$\chi^2$ or <i>F</i>
<i>M</i> Age ( <i>SD</i> )	41.21 (12.59)	44.72 (11.53)	3.503
Gender			0.546
Man	15 (20.30%)	14 (14.90%)	
Woman	59 (79.70%)	80 (85.10)	
Average years experience ( <i>SD</i> )	15.03 ( 11.63)	16.65 ( 10.56)	0.830
State			0.491
<i>M</i> Exposure to racial and ethnic minority students in class. <sup>3</sup> ( <i>SD</i> )	5.05 (7.35)	5.87 (7.64)	0.358
Urbancity			0.44
Urban	10 (16.90%)	23 (24.20%)	
Rural	22 (37.30%)	37 (38.90%)	
Suburban	27 (45.80)	35 (36.80%)	
Type of School			(2, <i>N</i> =131) 0.192
Public	38 (98.30%)	88 (93.60%)	
Private	0 (0.00%)	2 (2.10%)	
Charter	0 (0.00%)	3 (3.20%)	
Other	1 (1.70%)	0 (0.00%)	

*Note.* Frequencies and means of participants who completed the dependent variables and those who did not complete any dependent variables were compared using an ANOVA for age, years of experience teaching, and exposure to racial and ethnic minorities in their classroom. Chi-square tests of independence were employed to compare frequencies and percentages of participants for gender, statehood, urbancity, and school setting. No statistically significant differences were found between the two groups. Due to the low number of African American participants, a statistical comparison for the effect of race could not be made.

Table 2

*Demographic Characteristics of Teachers by Experimental Condition*

Characteristic	African American ( <i>n</i> = 34)	Asian American ( <i>n</i> = 33)	European American ( <i>n</i> = 27)	Total sample	$\chi^2$ or <i>F</i>
<i>M</i> age <sup>3</sup> ( <i>SD</i> )	44.44 (11.78)	44.09 (11.47)	45.24 (11.42)	44.72 (11.43)	<i>F</i> (2,90) = 1.790
Gender					
Man	5 (14.70%)	3 (11.10%)	6 (18.20%)	14 (15%)	
Woman	29 (85.30%)	24(88.90%)	27 (81.80%)	79 (85%)	
<i>M</i> Experience ( <i>SD</i> )	15.88 (10.93)	17.73 (10.33)	16.27 (10.68)	16.65 (10.56)	<i>F</i> (2,90) = 0.274
<i>M</i> Exposure to racial and ethnic minority students in class. <sup>3</sup> ( <i>SD</i> )	6.09 (8.57)	7.00 (8.24)	4.42 (5.23)	5.87 (7.64)	<i>F</i> (2,91) = 1.00
Urbancity					0.739
Urban	10 (29.40%)	5 (21.70%)	8 (34.80)	23 (24.70%)	
Rural	11 (32.40%)	10 (38.50%)	15 (45.50%)	10 (30.30%)	
Suburban	13 (38.20%)	11 (42.30%)	10 (30.30%)	10 (36.60%)	
Type of School					
Public	33 (97.1%)	25 (96.20%)	30 (90.90%)	88 (94.60%)	
Private	0 (0.00%)	1 (3.80%)	1 (3.0%)	2 (2.20%)	
Charter	1 (1.10%)	0 (0.00%)	2 ( 6.10%)	3 (3.20%)	
Race/Ethnicity					
European American	33 (97.10%)	27 (81.80%)	25 (96.20%)	86 (91.40%)	
African American	0 (0.00%)	6 (18.20%)	1 (3.80%)	7 (7.50%)	
Both	1 (2.90%)	0 (0.00%)	0 (0.00%)	1 (1.10%)	

*Note.* Frequencies and means of participants by conditions were compared using an ANOVA for age, years of experience teaching, and exposure to racial and ethnic minorities in their classroom. Chi-square tests of independence were employed to compare frequencies and percentages of participants for gender, statehood, urbancity, and school setting. No statistically significant differences were found between the two groups. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

Table 3

*States Frequency and Percentages by Conditions*

States	Condition			Total ( <i>N</i> = 83)	$\chi^2$
	African American ( <i>n</i> = 31 )	Asian American ( <i>n</i> = 30 )	European American ( <i>n</i> = 26 )		
Alabama	1 (2.90%)	0 (0.00%)	0 (0.00%)	1	
Arizona	0 (0.00%)	1 (3.00%)	0 (0.00%)	1	
Arkansas	0 (0.00%)	0 (0.00%)	1 (3.70%)	1	
California	1 (2.90%)	1 (3.00%)	1 (3.70%)	3	
Colorado	0 (0.00%)	0 (0.00%)	1 (3.70%)	1	
Illinois	1 (2.90%)	1 (3.00%)	0 (0.00%)	2	
Indiana	0 (0.00%)	1 (3.00%)	0 (0.00%)	1	
Iowa	0 (0.00%)	0 (0.00%)	1 (3.70%)	1	
Kentucky	1 (2.90%)	0 (0.00%)	0 (0.00%)	1	
Louisiana	1 (2.90%)	0 (0.00%)	0 (0.00%)	1	
Maryland	13 (38.20%)	11 (33.30%)	11 (40.70%)	35	
Massachusetts	0 (0.00%)	0 (0.00%)	1 (3.70%)	1	
Mississippi	0 (0.00%)	2 (6.10%)	0 (0.00%)	1	
Missouri	0 (0.00%)	1 (3.00%)	0 (0.00%)	1	
Montana	0 (0.00%)	1 (3.00%)	0 (0.00%)	1	
New Jersey	0 (0.00%)	0 (0.00%)	1 (3.70%)	1	
New Mexico	2 (5.90%)	2 (6.10%)	1 (3.70%)	5	
New York	0 (0.00%)	1 (3.00%)	0 (0.00%)	1	
Ohio	9 (26.50%)	8 (24.20%)	8 (29.60%)	25	
Pennsylvania	4 (11.80%)	1 (3.00%)	1 (3.70%)	6	
South Carolina	1 (2.90%)	1 (3.00%)	0 (0.00%)	2	
Texas	0 (0.00%)	1 (3.00%)	0 (0.00%)	1	

.648

*Note.* Chi-square tests of independence were employed to compare statehood for each condition. Due to lack of statehood in each cell statistical comparisons should be cautioned.

Table 4

*Means and Standard Deviations of Scale Scores by Experimental Condition*

	Condition				$\chi^2$ or $F$
	African American ( $n = 31$ )	Asian American ( $n = 30$ )	European American ( $n = 26$ )	Total ( $N = 87$ )	
ASEBA-TRF (6-18) Externalizing Problem Scale <sup>1</sup>					$F(2, 87) = 1.11$
<i>M</i>	62.43	64.67	64.04	63.66	
<i>SD</i>	5.56	7.02	6.0	6.19	
Skewness	0.51	.487	1.44	0.78	
Kurtosis	-0.35	1.75	2.41	1.47	
ASEBA-TRF (6-18) Internalizing Problem Scale <sup>1</sup>					$F(2, 87) = 2.79$
<i>M</i>	59.45	63.43	59.29	60.73	
<i>SD</i>	7.64	7.30	7.30	7.82	
Skewness	0.23	-0.23	-0.18	0.00	
Kurtosis	-8.31	-1.049	-0.37	-0.77	
Academic Functioning <sup>2</sup>					$F(2, 91) = 0.41$
<i>M</i>	2.94	2.91	2.74	2.87	
<i>SD</i>	0.78	1.01	0.94	0.91	
Skewness	-0.25	0.50	1.41	0.52	
Kurtosis	-0.14	-0.40	4.47	0.64	
Graduation and Post- Secondary Education Likelihood <sup>2</sup>					$F(2, 91) = 1.24$
<i>M</i>	4.23	4.09	4.81	4.35	
<i>SD</i>	1.69	1.86	2.04	1.86	
Skewness	0.64	0.34	0.41	0.51	
Kurtosis	0.72	0.07	-0.15	-.14	
Quality of Home Life <sup>2</sup>					$F(2, 88) = 3.63^*$
<i>M</i>	3.88	4.33	4.65	4.26	
<i>SD</i>	1.16	0.92	1.26	1.14	
Skewness	-1.04	0.51	-0.18	-0.31	
Kurtosis	0.61	0.65	-0.24	0.80	
Referral for Special Education <sup>2</sup>					$\chi^2(2, N = 94)$
<i>M</i>	1.16	1.20	1.23	1.22	
<i>SD</i>	0.37	0.41	0.43	.42	
Skewness	1.94	1.58	1.36	1.37	
Kurtosis	1.87	0.53	-0.18	-0.14	

Table 4

*Means and Standard Deviations of Scale Scores by Experimental Condition*

*Note.* Sample sizes vary due to occasional missing data. ASEBA-TRF (6-18) Externalizing Problem Scale and ASEBA-TRF (6-18) Internalizing scores are expressed in *T* scores. Values for academic (current academic functioning), graduation (likelihood student will graduate and pursue post-secondary education), and home life (quality of home life) were derived from a 9-point Likert scale with 1 = *least* and 9 = *most*. Values for referral closer to 1 represent a higher probability of referral and values closer to 2 represent a higher probability of no referral. An ANOVA was used to test effects of conditions for Externalizing Problems, Internalizing Problems, academic functioning, graduation and post-secondary likelihood, and quality of home life. A chi-square test for independence was used to test for effects of condition for referral for a special education evaluation.

\*  $p < .05$ .

Table 5

*Internalizing Problem Scale Analysis of Covariance Summary*

Source	Sum of Squares	df	Mean Square	F	$\eta^2$
Corrected Model	707.982	14	50.570	0.830	0.137
Intercept	8078.187	1	8078.187	132.579	0.645
Condition	13.582	2	6.791	0.111	0.003
Condition * Urbanicity	9.342	2	4.671	0.077	0.002
Urbanicity	77.301	1	77.301	1.269	0.017
Condition * Exposure	78.636	2	39.318	0.645	0.017
Exposure	48.329	1	48.329	0.793	0.011
Condition * Experience	9.747	2	4.874	0.080	0.002
Experience	8.552	1	8.552	0.140	0.002
Condition * Age	61.792	2	30.896	0.507	0.014
Age	32.598	1	32.598	0.535	0.007
Error	4447.972	73	60.931	0.830	0.137
Total	332360.000	88	50.570	132.579	0.645
Corrected Total	5155.955	87	8078.187	0.111	0.003

*Note.* Sample sizes vary due to occasional missing data. ASEBA-TRF (6-18)

Internalizing scores are expressed in *T* scores. An ANCOVA was used to test effects of covariance for urbanicity, exposure, experience, and age. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

\* $p < 0.01$ .

Table 6

*Externalizing Problems Scale ANCOVA*

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	$\eta^2$
Corrected Model	621.027	14	44.359	1.188	0.186
Intercept	8308.646	1	8308.646	222.464	0.753
Condition	7.862	2	3.931	0.105	0.003
Condition * Urbanicity	26.523	2	13.262	0.355	0.010
Urbanicity	76.855	1	76.855	2.058	0.027
Condition * Exposure	76.037	2	38.018	1.018	0.027
Exposure	1.880	1	1.880	0.050	0.001
Condition * Experience	139.057	2	69.528	1.862	0.049
Experience	.019	1	.019	0.001	0.000
Condition * Age	32.763	2	16.381	0.439	0.012
Age	42.920	1	42.920	1.149	0.015
Error	2726.428	73	37.348		
Total	361240.000	88			
Corrected Total	3347.455	87			0.186

*Note.* Sample sizes vary due to occasional missing data. ASEBA-TRF (6-18)

Externalizing scores are expressed in *T* scores. An ANCOVA was used to test effects of covariance for urbanicity, exposure, experience, and age. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

\* $p < 0.01$ .

Table 7

*Academic Functioning ANCOVA*

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	$\eta^2$
Corrected Model	14.414	14	1.030	1.362	0.201
Intercept	32.984	1	32.984	43.647	0.365
Condition	0.956	2	0.478	0.633	0.016
Condition * Urbanicity	0.275	2	0.138	0.182	0.005
Urbanicity	0.088	1	0.088	0.116	0.002
Condition * Exposure	2.928	2	1.464	1.937	0.049
Exposure	0.294	1	0.294	0.389	0.005
Condition * Experience	3.970	2	1.985	2.627	0.065
Experience	0.611	1	0.611	0.808	0.011
Condition * Age	0.322	2	.161	0.213	0.006
Age	2.534	1	2.534	3.353	0.042
Error	57.432	76	0.756		
Total	809.000	91			
Corrected Total	71.846	90			

*Note.* Sample sizes vary due to occasional missing data. Academic functioning ratings were derived from a 9-point Likert scale with 1 = *least* and 9 = *most*. An ANCOVA was used to test effects of covariance for urbanicity, exposure, experience, and age. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

\* $p < 0.01$ .



Table 8

*Likelihood for Post-Secondary Education ANCOVA*

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	$\eta^2$
Corrected Model	37.741	14	2.696	0.732	0.119
Intercept	22.037	1	22.037	5.981	0.073
Condition	1.141	2	0.571	0.155	0.004
Condition * Urbanicity	0.107	2	0.053	0.014	0.000
Urbanicity	5.947	1	5.947	1.614	0.021
Condition * Exposure	2.054	2	1.027	0.279	0.007
Exposure	15.876	1	15.876	4.309	0.054
Condition * Experience	7.294	2	3.647	0.990	0.025
Experience	1.850	1	1.850	0.502	0.007
Condition * Age	3.597	2	1.799	0.488	0.013
Age	0.919	1	0.919	0.249	0.003
Error	280.018	76	3.684		
Total	2015.000	91			
Corrected Total	317.758	90			

*Note.* Sample sizes vary due to occasional missing data. Likelihood for Post-Secondary Education ratings were derived from a 9-point Likert scale with 1 = *least* and 9 = *most*. An ANCOVA was used to test effects of covariance for urbanicity, exposure, experience, and age. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

. \* $p < 0.01$ .

Table 9

*Quality of Home Life ANCOVA*

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	$\eta^2$
Corrected Model	26.110	14	1.865	1.515	0.225
Intercept	85.503	1	85.503	69.446	0.488
Condition	0.845	2	0.423	0.343	0.009
Condition * Urbanicity	1.724	2	0.862	0.700	0.019
Urbanicity	0.187	1	0.187	0.152	0.002
Condition * Exposure	0.830	2	0.415	0.337	0.009
Exposure	0.336	1	0.336	0.273	0.004
Condition * Experience	0.889	2	0.445	0.361	0.010
Experience	2.103	1	2.103	1.708	0.023
Condition * Age	0.352	2	0.176	0.143	0.004
Age	6.419	1	6.419	5.213	0.067
Error	89.879	73	1.231		0.225
Total	1697.000	88			0.488
Corrected Total	115.989	87			0.009

*Note.* Sample sizes vary due to occasional missing data. Quality of home life ratings were derived from a 9-point Likert scale with 1 = *least* and 9 = *most*. An ANCOVA was used to test effects of covariance for urbanicity, exposure, experience, and age. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

\* $p < 0.01$ .

Table 10

*Referral ANCOVA*

Source	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	$\eta^2$
Corrected Model	2.071	14	0.148	0.909	.143
Intercept	4.693	1	4.693	28.837	0.275
Condition	0.012	2	0.006	0.038	0.001
Condition * Urbanicity	0.149	2	0.075	0.458	0.012
Urbanicity	0.001	1	0.001	0.006	0.000
Condition * Exposure	0.803	2	0.402	2.468	0.061
Exposure	0.119	1	0.119	0.734	0.010
Condition * Experience	0.595	2	0.298	1.829	0.046
Experience	0.011	1	0.011	0.067	0.001
Condition * Age	0.564	2	0.282	1.732	0.044
Age	0.036	1	0.036	0.222	0.003
Error	12.369	76	0.163		
Total	145.000	91			
Corrected Total	14.440	90			

*Note.* Sample sizes vary due to occasional missing data. Referral ratings were derived from a 1 = *yes* and 2 = *not*. An ANCOVA was used to tests effects of covariance for urbanicity, exposure, experience, and age. Due to the lower number of African Americans, a statistical comparison for the effect of race could not be made.

\* $p < 0.01$ .

## **Appendix B**

### **Consent to Participate in a Research Study**

#### **Behavioral Rating of a Student**

You are being invited to take part in a research study about a rating scale that teachers are asked to use for rating their students. You are being invited to take part in this research study because you have been identified as a teacher by someone or an organization. If you volunteer to take part in this study, you will be one of about 550 people to do so nationally.

The person in charge of this study is Isaac Woods, Jr., of University of Memphis Department of Psychology.

The purpose of this study is to determine the usefulness of teacher's ratings in understanding academic achievement and other school-based outcomes.

If you are not a teacher or have no teaching experience in elementary or secondary education, then you should not complete this study.

The research procedures will be conducted online at qualtrics.com and an additional link will be provided to aseba.org to complete a portion of the study. You will need to have a computer, tablet, laptop, or smartphone with internet access, basic computer skills, and a modern web-browser with JavaScript enabled. The study can be completed from anywhere at any time of the day. The total amount of time you will be asked to volunteer for this study is between 15 to 25 minutes.

First, you will complete the Teacher Information Form about your demographics and teaching experience. – 1 minute

Second, you will read along with and listen to a case study. – 2 minutes

Third, you will complete a rating scale based on the child described in the case study. – 10-15 minutes

Lastly, you will complete an 11-item questionnaire about the child described in the case study. – 2 minutes

To the best of our knowledge, your participation in this study will lead to no more risk of harm than you would experience in everyday life.

There are no costs associated with taking part in the study. We anticipate that there will be no personal benefit to you from taking part in this study. If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop

at any time during the study and still keep the benefits and rights you had before volunteering.

This study is anonymous. That means that no one, not even members of the research team, will know that the information you give came from you.

If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. ‘

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the investigator, Isaac Woods, Jr. at [ilwoods@memphis.edu](mailto:ilwoods@memphis.edu). If you have any questions about your rights as a volunteer in this research, contact the Institutional Review Board staff at the University of Memphis at 901-678-2705. We will give you an electronically signed copy of this consent form to take with you. Also, a PDF version of this consent form is available for you to download and you are free to print the consent form online.

By clicking “Yes” below you acknowledge that you have read and understand that:

- Your participation in this survey is voluntary. You may withdraw your consent and discontinue participation in the project at any time. Your refusal to participate will not result in any penalty.
- You do not waive any legal rights or release University of Memphis, its agents, or the investigator from liability for negligence.
- You have given consent to be a subject of this research.

Do you wish to participate in this study?

Yes, I want to participate

No, I do not want to participate

## Appendix C

### Teacher Information Form

Please answer the following questions below. Do not include any names or addresses.

What is your gender?

- Male
- Female

Age

Are you Spanish / Hispanic / Latino(a)? (Select the appropriate group(s)).

- No, not of Hispanic, Latino(a), or Spanish origin
- Yes, Cuban
- Yes, Mexican, Mexican American, Chicano
- Yes, Puerto Rican
- Yes, South/Central American

Yes, other Hispanic, Latino(a), or Spanish origin, please specify:

What race / ethnic heritage do you identify with?

- Caucasian/White
- African American/Black
- American Indian or Alaskan Native
- East Indian
- Chinese
- Filipino
- Japanese
- Korean
- Vietnamese
- Other Asian (for example: Hmong, Laotian, Thai, Pakistani, Cambodian, etc)
- Native Hawaiian
- Guamanian or Chamorro
- Samoan
- Other Pacific Islander (for example: Fijian, Tongan, etc)
- Other Race (Not provided)

What percentage of your students are from racial and ethnic minority backgrounds?



Highest degree and certification:

Are you currently employed as a teacher or working in a classroom setting?

Yes

No

What grade level are you currently teaching? ( Check all that apply.)

Preschool

Elementary School (grades K to 5th)

Middle School (grades 6th to 8th)

High School (grades 9th to 12th)

What class do you teach? Check all that apply.

General Education

Bilingual/ESL

Gifted/Talented

Special Education

Other

In what state do you currently reside?

Current school setting:

Urban

Rural

Suburban



Type of School:

Public

Private

Charter

Other

## Appendix D

### African American Student Vignette

*Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student based on the information provided on the student's behavior problems and learning problems immediately after reading this vignette.***



David is a 9-year-old African American boy in your third-grade classroom. David is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about David's developmental history and educational history.

On some days, David seems to have typical problems at school for someone his age. When David first arrived to his new school, he would appear sad and fearful and was moody most of the day. Whenever the class deviates from their typical schedule, David appears to be sensitive to this change and displays signs of nervousness, and worry. David often struggles with concentrating and sitting still. At times, David seems to space out, and he forgets to carry out task or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. When he is bored, he sometimes disturbs other children by teasing them or engaging in excess horse-play. During desk work, David has purposely broken pencils, written on textbooks, and drawn on desks tops. Although he does interact with a few classmates, some students have reported that David is uncooperative and mean and that he quickly gets angry when he does not get his way. When other teachers have asked him to do something that he does not want to do, he has defiantly refused their request before. Punishment, such as loss of recess, classroom privileges, phone call to his parents, and time-out for defiant and aggressive acts does not seem to change his behavior. Sometimes, when he is punished, he cries very loudly.

Although David presents various problems in your classroom, his behavior is not the worst in your class. In addition, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment homework. Whenever a classroom assignment is too hard for him (or he does not want to do the assignment), he whines and complains about feeling sick and having various aches and pains.

*Based on your reading of the vignette and considering your experiences as a teacher, please complete all the items on page 3 and 4 of the rating scale for the hypothetical student as if you are the student's current teacher. Complete every item rating scale.*

## Asian American Student Vignette

Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student based on the information provided on the student's behavior problems and learning problems immediately after reading this vignette.**



David is a 9-year-old Asian American boy in your third-grade classroom. David is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about David's developmental history and educational history.

On some days, David seems to have typical problems at school for someone his age. When David first arrived to his new school, he would appear sad and fearful and was moody most of the day. Whenever the class deviates from their typical schedule, David appears to be sensitive to this change and displays signs of nervousness, and worry. David often struggles with concentrating and sitting still. At times, David seems to space out, and he forgets to carry out task or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. When he is bored, he sometimes disturbs other children by teasing them or engaging in excess horse-play. During desk work, David has purposely broken pencils, written on textbooks, and drawn

on desks tops. Although he does interact with a few classmates, some students have reported that David is uncooperative and mean and that he quickly gets angry when he does not get his way. When other teachers have asked him to do something that he does not want to do, he has defiantly refused their request before. Punishment, such as loss of recess, classroom privileges, phone call to his parents, and time-out for defiant and aggressive acts does not seem to change his behavior. Sometimes, when he is punished, he cries very loudly.

Although David presents various problems in your classroom, his behavior is not the worst in your class. In addition, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment homework. Whenever a classroom assignment is too hard for him (or he does not want to do the assignment), he whines and complains about feeling sick and having various aches and pains.

*Based on your reading of the vignette and considering your experiences as a teacher, please complete all the items on page 3 and 4 of the rating scale for the hypothetical student as if you are the student's current teacher. Complete every item rating scale.*

## European American Student Vignette

*Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student based on the information provided on the student's behavior problems and learning problems immediately after reading this vignette.***



David is a 9-year-old European American boy in your third-grade classroom. David is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about David's developmental history and educational history.

On some days, David seems to have typical problems at school for someone his age. When David first arrived to his new school, he would appear sad and fearful and was moody most of the day. Whenever the class deviates from their typical schedule, David appears to be sensitive to this change and displays signs of nervousness, and worry. David often struggles with concentrating and sitting still. At times, David seems to space out, and he forgets to carry out task or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. When he is bored, he sometimes disturbs other children by teasing them or engaging in excess horse-play. During desk work, David has purposely broken pencils, written on textbooks, and drawn on desks tops. Although he does interact with a few classmates, some students have reported that David is uncooperative and mean and that he quickly gets angry when he

does not get his way. When other teachers have asked him to do something that he does not want to do, he has defiantly refused their request before. Punishment, such as loss of recess, classroom privileges, phone call to his parents, and time-out for defiant and aggressive acts does not seem to change his behavior. Sometimes, when he is punished, he cries very loudly.

Although David presents various problems in your classroom, his behavior is not the worst in your class. In addition, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment homework. Whenever a classroom assignment is too hard for him (or he does not want to do the assignment), he whines and complains about feeling sick and having various aches and pains.

*Based on your reading of the vignette and considering your experiences as a teacher, please complete all the items on page 3 and 4 of the rating scale for the hypothetical student as if you are the student's current teacher. Complete every item rating scale.*

## Appendix E

### Questionnaire

*Please answer the questions below based on the case study you just read.*

1. How would you rate this child's quality of home life?

1  2  3  4  5  6  7  8  9

Very Poor Quality                      Very Good Quality

2. How would you rate this child's current academic achievement level?

1  2  3  4  5  6  7  8  9

Very Poor/Low                              Very Good/High

3. How likely is it that this child will graduate high school and go out to post-secondary education?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

4. How likely are you to referral this child for a special education or intervention for emotional disturbance "or equivalent special education category in your state"?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

5. How likely are you to referral this child for a special education or intervention for intellectual disability?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

6. How likely are you to referral this child for a special education or intervention for multiple disabilities?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

7. How likely are you to referral this child for a special education or intervention for specific learning disability?

1  2  3  4  5  6  7  8  9





## Appendix F: Teacher Invitation Email and Posting

Dear Teacher,

You are being invited to participate in a study about a rating scale that teachers can use to rate the behaviors of their students. This study is my master's thesis project and open to teachers across the nation. We are asking for your help with this study.

If you agree to participate, we will ask you to read a brief vignette about a hypothetical child and then complete the rating scale based on your impressions of the hypothetical child. Lastly, we will ask that you complete a short questionnaire. In total, your part of the study should take approximately 15-20 minutes.

If you agree to participate in this study [click here](#).

If any errors occur in accessing the study, please contact me at [ilwoods@memphis.edu](mailto:ilwoods@memphis.edu).

To protect your identity and school, we are not asking you to provide your name or the name of your school. The specific results of the study will not be provided to you or to any other persons or institutions.

Participation in this project is voluntary, and you may choose to withdraw from participation at any time. Declining or discontinuing participation will not lead to penalties, nor will participation in this project impact your employment in school settings, certification, or licensure. As required by the university review board, note that The University of Memphis does not have any funds budgeted for compensation for injury, damages, or other expenses.

Thank you for your time and consideration.

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Isaac Woods, B.A.

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## Appendix G

*Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student based on the information provided on the student's behavior problems and learning problems immediately after reading this vignette.***

David is a 9-year-old boy in your third-grade classroom. David is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about David's developmental history and educational history.

On some days, David seems to have typical problems at school for someone his age. When David first arrived to his new school, he would appear sad and fearful and was moody most of the day. Whenever the class deviates from their typical schedule, David appears to be sensitive to this change and displays signs of nervousness, and worry. David often struggles with concentrating and sitting still. At times, David seems to space out, and he forgets to carry out task or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. When he is bored, he sometimes disturbs other children by teasing them or engaging in excess horse-play. During desk work, David has purposely broken pencils, written on textbooks, and drawn on desks tops. Although he does interact with a few classmates, some students have reported that David is uncooperative and mean and that he quickly gets angry when he does not get his way. When other teachers have asked him to do something that he does not want to do, he has defiantly refused their request before. Punishment, such as loss of recess, classroom privileges, phone call to his parents, and time-out for defiant and aggressive acts does not seem to change his behavior. Sometimes, when he is punished, he cries very loudly.

Although David presents various problems in your classroom, his behavior is not the worst in your class. In addition, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment homework. Whenever a classroom assignment is too hard for him (or he does not want to do the assignment), he whines and complains about feeling sick and having various aches and pains.

## Questionnaire

*Please answer the questions below based on the case study you just read.*

1. How would you rate this child's quality of home life?

1  2  3  4  5  6  7  8  9

Very Poor Quality                      Very Good Quality

2. How would you rate this child's current academic achievement level?

1  2  3  4  5  6  7  8  9

Very Poor/Low                              Very Good/High

3. How likely is it that this child will graduate high school and go out to post-secondary education?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

4. How likely are you to referral this child for a special education or intervention for emotional disturbance "or equivalent special education category in your state"?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

5. How likely are you to referral this child for a special education or intervention for intellectual disability?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

6. How likely are you to referral this child for a special education or intervention for multiple disabilities?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

7. How likely are you to referral this child for a special education or intervention for specific learning disability?

1  2  3  4  5  6  7  8  9

Not Likely                                      Very Likely

8. How likely are you to referral this child for a special education or intervention for speech or language impairment?

1  2  3  4  5  6  7  8  9

Not Likely Very Likely

9. How likely are you to referral this child for a special education or intervention for autism?

1  2  3  4  5  6  7  8  9

Not Likely Very Likely

10. How likely are you to referral this child for special education or intervention for attention deficit hyperactivity disorder (ADHD) and/or attention deficit disorder (ADD)?

1  2  3  4  5  6  7  8  9

Not Likely Very Likely

11. How likely are you to referral this child for a special education or intervention for other health impairment disability besides attention deficit hyperactivity disorder (ADHD) and/or attention deficit disorder (ADD)?

1  2  3  4  5  6  7  8  9

Not Likely Very Likely

*Please answer the following questions concerning your experience reading the case study and answering the questions. Please provide any additional feedback in the comment box.*

1. How difficult were the case study to read and comprehend?

1  2  3  4  5  6  7  8  9

Not Difficult Very Difficult

[Click here to enter text.](#)

2. What terms in the case study or questionnaire need to be replaced or further explained?

[Click here to enter text.](#)

3. What words or phrases in the case study need to be altered for greater clarity?

[Click here to enter text.](#)

4. How difficult were the questions to read and comprehend?

1  2  3  4  5  6  7  8  9

Not Difficult

Very Difficult

[Click here to enter text.](#)

5. What terms in the questionnaire need to be replaced or further explained?

[Click here to enter text.](#)

6. What words or phrases in the questionnaire need to be altered for greater clarity?

[Click here to enter text.](#)

## Rating of the Student

*Using the scale below each photograph to rate the attractiveness of each student in the photograph.*



1. How attractive is the student in this picture?

1  2  3  4  5  6  7  8  9

Not Attractive

Very Attractive

2. What age does this student appear to be?

6  7  8  9  10  11  12  13  14



1. How attractive is the student in this picture?

1  2  3  4  5  6  7  8  9

Not Attractive

Very Attractive

2. What age does this student appear to be?

6  7  8  9  10  11  12  13  14





1. How attractive is the student in this picture?  
1  2  3  4  5  6  7  8  9   
Not Attractive Very Attractive
2. What age does this student appear to be?  
6  7  8  9  10  11  12  13  14

## Appendix H

*Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student. Please base your responses on the information provided about the student's behavior problems and learning problems immediately after reading this vignette.** [Audio for Jayden](#)*

Jayden Washington is a 9-year-old African American boy in your third-grade classroom. Jayden is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about Jayden's behavior.

On some days, Jayden seems to have typical problems at school for someone his age. When Jayden first arrived at his new school, he would appear sad and was moody most of the day. Now, whenever the class deviates from its typical schedule, Jayden appears to be sensitive to this change and displays signs of nervousness, and worry. Jayden often struggles with concentrating and sitting still. At times, Jayden may space out, and he forgets to carry out tasks or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. Jayden seems to have trouble standing in lines and waiting and gets bored. When he is bored, he sometimes disturbs other children by teasing or engaging in excess horse-play. During desk work, Jayden has purposely broken pencils, written on textbooks, and drawn on desks tops. Although he does interact with a few classmates, some students have reported that Jayden is uncooperative and mean and that he quickly gets angry when he does not get his way. When other teachers try to tell him to do something that he does not want to do, he has defiantly refused their request. Punishment, such as loss of recess, and classroom privileges, phone calls to Mrs. Washington, and time-out, for defiant and aggressive acts does not seem to change his behavior . Sometimes when he is punished, he cries very loudly.

Although Jayden presents various problems in your classroom, his behavior is not the worst in your class. However, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment. Whenever a classroom assignment is too hard for him (or he does not want to do an assignment), he whines and complains about feeling sick and having various aches and pains.

True or False: The students name is Jayden Washington?

True

False

What race/ethnicity is the student?

What is the student's grade level?

True or False: Academic concerns can be found in the last paragraph?

True

False

*Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student. Please base your responses on the information provided about the student's behavior problems and learning problems immediately after reading this vignette.** [Audio for Ryan](#)*

Ryan Zhang is a 9-year-old Asian American boy in your third-grade classroom. Ryan is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about Ryan's behavior.

On some days, Ryan seems to have typical problems at school for someone his age. When Ryan first arrived at his new school, he would appear sad and was moody most of the day. Now, whenever the class deviates from its typical schedule, Ryan appears to be sensitive to this change and displays signs of nervousness, and worry. Ryan often struggles with concentrating and sitting still. At times, Ryan may space out, and he forgets to carry out tasks or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. Ryan seems to have trouble standing in lines and waiting and gets bored. When he is bored, he sometimes disturbs other children by teasing or engaging in excess horse-play. During desk work, Ryan has purposely broken pencils, written on textbooks, and drawn on desks tops. Although he does interact with a few classmates, some students have reported that Ryan is uncooperative and mean and that he quickly gets angry when he does not get his way. When other teachers try to tell him to do something that he does not want to do, he has defiantly refused their request. Punishment, such as loss of recess, and classroom privileges, phone calls to Mrs. Zhang, and time-out, for defiant and aggressive acts does not seem to change his behavior. Sometimes when he is punished, he cries very loudly.

Although Ryan presents various problems in your classroom, his behavior is not the worst in your class. However, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment. Whenever a classroom assignment is too hard for him (or he does not want to do an assignment), he whines and complains about feeling sick and having various aches and pains.

True or False: The students name is Ryan Zhang?

True

False

What race/ethnicity is the student?

What is the student's grade level?

True or False: Academic concerns can be found in the last paragraph?

True

False

*Please read the vignette below about a hypothetical student. Consider your experiences as a teacher with children like this student. **Be prepared to rate how well statements or questions describe the student. Please base your responses on the information provided about the student's behavior problems and learning problems immediately after reading this vignette.** [Audio for Connor](#)*

Connor Yoder is a 9-year-old European American boy in your third-grade classroom. Connor is new to the school and has displayed several problematic behaviors that seem to vary every day. Except for what has been observed, little is known about Connor's behavior.

On some days, Connor seems to have typical problems at school for someone his age. When Connor first arrived at his new school, he would appear sad and was moody most of the day. Now, whenever the class deviates from its typical schedule, Connor appears to be sensitive to this change and displays signs of nervousness, and worry. Connor often struggles with concentrating and sitting still. At times, Connor may space out, and he forgets to carry out tasks or understand directions. He also fidgets, wanders about the classroom, and has trouble waiting and standing in lines. Connor seems to have trouble standing in lines and waiting and gets bored. When he is bored, he sometimes disturbs other children by teasing or engaging in excess horse-play. During desk work, Connor has purposely broken pencils, written on textbooks, and drawn on desk tops. Although he does interact with a few classmates, some students reported that Connor is uncooperative and mean and that he quickly gets angry when he does not get his way. When other teachers try to tell him to do something that he does not want to do, he has defiantly refused their request. Punishment, such as loss of recess, and classroom privileges, phone calls to Mrs. Yoder, and time-out, for defiant and aggressive acts does not seem to change his behavior. Sometimes when he is punished, he cries very loudly.

Although Connor presents various problems in your classroom, his behavior is not the worst in your class. However, he seems to have fallen behind academically compared to his peers and sometimes does not turn in or complete his assignment. Whenever a classroom assignment is too hard for him (or he does not want to do an assignment), he whines and complains about feeling sick and having various aches and pains.

True or False: The students name is Connor Yoder?

True

False

What race/ethnicity is the student?

What is the student's grade level?

True or False: Academic concerns can be found in the last paragraph?

True

False

## Appendix I

### Questionnaire

*Please answer the questions below based on the vignette you just read.*

1. How would you rate Jayden's quality of home life?

1  2  3  4  5  6  7  8  9

Very Poor Quality  
Quality

Very Good

2. How would you rate Jayden's current academic achievement level?

1  2  3  4  5  6  7  8  9

Very Poor/Low

Very Good/High

3. How likely is it that Jayden will behave like an angel?

1  2  3  4  5  6  7  8  9

Not Likely  
Likely

Very

4. How likely is it that Jayden will graduate from high school and go on to post-secondary education? 1  2  3  4  5  6  7  8  9

Not Likely  
Likely

Very

5. Jayden is perfect in every way.

True

False

6. Do you believe that Jayden should be referred for educational or diagnostic assessment?

Yes

No

7. If you answered yes to the previous question, what disability category or categories do you believe that Jayden should be referred for?

(select all that apply)

Emotional Disturbance "or equivalent special education category in your state" - means a condition exhibiting one or more of the following characteristics over a long period of

time and to a marked degree that adversely affects a child's educational performance: (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors. (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. (C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems.(ii) Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance under paragraph (c)(4)(i) of this section.

Intellectual Disability - means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance.

Multiple Disabilities - means concomitant impairments (such as intellectual disability-blindness or intellectual disability-orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments. Multiple disabilities does not include deaf-blindness.

Specific Learning Disability - Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Speech or Language Impairment - means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance.

Autism - means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

Other Health Impairment including Attention Deficit Hyperactivity Disorder (ADHD) or Attention Deficit Disorder (ADD)

## Questionnaire

*Please answer the questions below based on the vignette you just read.*

1. How would you rate Ryan's quality of home life?

1  2  3  4  5  6  7  8  9

Very Poor Quality  
Quality

Very Good

2. How would you rate Ryan's current academic achievement level?

1  2  3  4  5  6  7  8  9

Very Poor/Low  
Very Good/High

3. How likely is it that Ryan will behave like an angel?

1  2  3  4  5  6  7  8  9

Not Likely  
Likely

Very

4. How likely is it that Ryan will graduate from high school and go on to post-secondary education? 1  2  3  4  5  6  7  8  9

Not Likely  
Likely

Very

5. Ryan is perfect in every way.

True

False

6. Do you believe that Ryan should be referred for educational or diagnostic assessment?

Yes

No

7. If you answered yes to the previous question, what disability category or categories do you believe that Ryan should be referred for?

(select all that apply)

Emotional Disturbance "or equivalent special education category in your state" - means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors. (B) An inability to build or maintain satisfactory interpersonal relationships with peers



and teachers. (C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems.(ii) Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance under paragraph (c)(4)(i) of this section.

Intellectual Disability - means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance.

Multiple Disabilities - means concomitant impairments (such as intellectual disability-blindness or intellectual disability-orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments. Multiple disabilities does not include deaf-blindness.

Specific Learning Disability - Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Speech or Language Impairment - means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance.

Autism - means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

Other Health Impairment including Attention Deficit Hyperactivity Disorder (ADHD) or Attention Deficit Disorder (ADD)

## Questionnaire

*Please answer the questions below based on the vignette you just read.*

1. How would you rate Connor's quality of home life?

1  2  3  4  5  6  7  8  9

Very Poor Quality  
Quality

Very Good

2. How would you rate Connor's current academic achievement level?

1  2  3  4  5  6  7  8  9

Very Poor/Low

Very Good/High

3. How likely is it that Ryan will behave like an angel?

1  2  3  4  5  6  7  8  9

Not Likely  
Likely

Very

4. How likely is it that Connor will graduate from high school and go on to post-secondary education? 1  2  3  4  5  6  7  8  9

Not Likely  
Likely

Very

5. Connor is perfect in every way.

True

False

6. Do you believe that Connor should be referred for educational or diagnostic assessment?

Yes

No

7. If you answered yes to the previous question, what disability category or categories do you believe that Connor should be referred for?

(select all that apply)

Emotional Disturbance "or equivalent special education category in your state" - means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors.

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. (C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems. (ii) Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance under paragraph (c)(4)(i) of this section.

Intellectual Disability - means significantly subaverage general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance.

Multiple Disabilities - means concomitant impairments (such as intellectual disability-blindness or intellectual disability-orthopedic impairment), the combination of which causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments. Multiple disabilities does not include deaf-blindness.

Specific Learning Disability - Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Speech or Language Impairment - means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child's educational performance.

Autism - means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

Other Health Impairment including Attention Deficit Hyperactivity Disorder (ADHD) or Attention Deficit Disorder (ADD)

## Appendix J

Hello,

My name is Isaac Woods. I was told to email this address from a representative for OHEA. I am requesting help recruiting teachers for an online study. This study is a study about a rating scale that teachers can use to rate the behaviors of their students. Participants will complete demographic information, read a vignette about a hypothetical student, and complete a behavioral rating form. This is an online study that is open to teachers across the nation. In total, the study should take approximately 15 minutes. This study is a part of my thesis and a requirement for me to graduate. Any help will be greatly appreciated. I have attached a consent form and pasted my recruitment letter to teachers below:

Dear Teacher,

You are being invited to participate in a study about a rating scale that teachers can use to rate the behaviors of their students. This study is open to teachers across the nation. We are asking for your help with this study.

If you agree to participate, we will ask you to read a brief vignette about a hypothetical child and then complete the rating scale based on your impressions of the hypothetical child. Lastly, we will ask that you complete a short questionnaire. In total, your part of the study should take approximately 15-20 minutes.

If you agree to participate in this study click here or copy and paste the url: [https://umcas.co1.qualtrics.com/SE/?SID=SV\\_2rXmLLvGrHNIjIN](https://umcas.co1.qualtrics.com/SE/?SID=SV_2rXmLLvGrHNIjIN) .

If any errors occur in accessing the study, please contact me at [ilwoods@memphis.edu](mailto:ilwoods@memphis.edu).

Thank you for your time and consideration.

---

Isaac Woods, B.A.

Thank you!

Isaac Woods, B. A.  
School Psychology Doctoral Student  
University of Memphis  
[ilwoods@memphis.edu](mailto:ilwoods@memphis.edu)  
[919-210-1663](tel:919-210-1663)



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Fax: 901.678.2199  
[www.memphis.edu/irb](http://www.memphis.edu/irb)

## Institutional Review Board

To: Isaac Woods

From: [REDACTED], Chair, Institutional Review Board  
For the Protection of Human Subjects  
[irb@memphis.edu](mailto:irb@memphis.edu)

Subject: The Teacher-Student Racial/ethnic Match impact  
on the Teacher's Ratings of the Student (#2940)

Approval Date: Full Board approval November 20, 2013 with  
Expedited Modification approval January 10, 2014

The University of Memphis Institutional Review Board, FWA00006815, has reviewed and approved your submission in accordance with all applicable statuses and regulations as well as ethical principles.

Approval of this project is given with the following obligations:

1. If this IRB approval has an expiration date, an approved renewal must be in effect to continue the project prior to that date. If approval is not obtained, the human consent form(s) and recruiting material(s) are no longer valid and any research activities involving human subjects must stop.
2. When the project is finished or terminated, a completion form must be completed and sent to the board via e-mail at [irb@memphis.edu](mailto:irb@memphis.edu). This form can be obtained on our website at <http://www.memphis.edu/irb/forms.php>.
3. No change may be made in the approved protocol without prior board approval, whether the approved protocol was reviewed at the Exempt, Expedited or Full Board level.
4. Exempt approvals are considered to have no expiration date and no further review is necessary unless the protocol needs modification.

Thank you,

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[REDACTED]  
Chair, Institutional Review Board  
The University of Memphis

# The University of Vermont



**ASEBA**

**Research Center for Children, Youth & Families, Inc.**

**A Non-Profit Corporation**

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Site Manager's address: University of Memphis, 400 Innovation Drive, Memphis, TN 38152; e-mail: [rgfloyd@memphis.edu](mailto:rgfloyd@memphis.edu); tel: 901-678-4846; fax: 901-678-2579.

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