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INVESTIGATING BELIEFS & ATTITUDES REGARDING EQUITABLE TEACHING & DISCIPLINE
PRACTICES: RACE ESSENTIALISM IN SCHOOLS

by

Jamee S. Carroll, M.S.

A Dissertation submitted to the Faculty of the Department of Psychology,
Marquette University
in Partial Fulfilment of the Requirements for
the Degree of Doctor of Philosophy
in Clinical Psychology

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ABSTRACT
INVESTIGATING BELIEFS & ATTITUDES REGARDING EQUITABLE TEACHING & DISCIPLINE
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Jamee Carroll, M.S.

Marquette University, 2022

Black, Latinx, and Indigenous adolescents experience more suspensions, expulsions, and school-based arrests than White students. However, minoritized students do not engage in problematic or disruptive behaviors more frequently but rather at equal or lower rates than their White counterparts. One factor that may contribute to this discipline gap is race essentialism, which is the belief that there are deep-rooted, unalterable traits and abilities unique to each racial group. Race essentialism, which has been linked to stereotyping, prejudice, intergroup trust and closeness, and cognitive flexibility, has not been studied in a school discipline context. Demonstrating associations between race essentialism and teachers' beliefs and practices, such as discipline, empathy, and growth mindset, as well as their beliefs about working with minoritized students, may bridge the two fields of research. Therefore, the primary goals of the proposed study were to 1) examine the psychometric properties of a measure of race essentialism previously used in other contexts, and 2) using a vignette, investigate whether endorsement of racial essentialist views was related to preservice and practicing teachers' beliefs and attitudes regarding equitable teaching and discipline practices. The third aim was to explore whether the manipulation of preservice teachers' beliefs about race was associated with perceptions of diverse students and their discipline practices. Generally, the results provided evidence that race essentialism is related to educators' perceptions of minoritized students' misbehavior and their beliefs about these students more broadly.

ACKNOWLEDGEMENTS

Jamee Carroll, M.S.

Thank you.

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Introduction

Students of color, especially in urban school districts, are victims of the systemic oppression that is the criminalization of education. Schools are over-policed, with metal detectors, security guards, rigid and exclusionary disciplinary practices, and a lack of restorative approaches to punishment. The environment is punitive and harmful to adolescent development broadly, but it also contributes directly to the disciplinary gap (Lawrence, 2007). School discipline has not been evenly distributed, which is why there is an overrepresentation of minoritized students, predominantly Black, Latinx, and Indigenous adolescents, who experience more suspensions, expulsions, and school-based arrests (Fenning & Rose, 2007; Gregory et al., 2015; Schiff, 2017). Most concerning, however, is that these students do not engage in problematic or disruptive behaviors more frequently but rather at equal or lower rates than their White counterparts (Kupchik, 2010). One factor that may contribute to this problem is race essentialism, which is the belief that there are deep-rooted, unalterable traits and abilities unique to each racial group (Gelman, 2004). Race essentialism has been linked to stereotyping, prejudice, intergroup trust and closeness, and cognitive flexibility (Chao et al., 2013; Gaither et al., 2014; Williams & Eberhardt, 2008). Differential discipline practices also have been associated with racial stereotyping, prejudice, and other intergroup dynamics. However, teachers' beliefs regarding student discipline and race essentialism have not been jointly explored, and race essentialism has never been studied in a school context.

Given the novelty of exploring race essentialism as a factor in school experiences, it is important to establish the validity of measuring this construct among teachers and those currently pursuing a degree in education in the midst of society's heightened racial awareness. This reexamination of race conceptions is especially relevant in the context of the increased attention and scrutiny of race relations and racism following the police murders of George Floyd and Breonna Taylor in 2020. The rapid growth of the #BlackLivesMatter movement and global protests may have led some to introspection and shifted people's perceptions about the biological vs. social basis of race. Demonstrating associations between race essentialism and teachers' beliefs and practices, such as discipline, empathy, and growth mindset, as well as their beliefs about working with minoritized students, may bridge two fields of research that are ripe for further study. Consequently, the primary goals of the proposed study were to 1) examine the psychometric properties of a measure of race essentialism previously used in other contexts, 2) investigate whether endorsement of racial essentialist views was related to preservice and practicing teachers' beliefs and attitudes regarding equitable teaching and discipline practices, and 3) explore whether the manipulation of beliefs about race was associated with perceptions of diverse students and discipline practices.

Minoritized Students' School Experiences

While positive teacher-student relationships can serve as a foundation for healthy adolescent development, it is well established that many minoritized students do not reap the benefits of this protective factor (Anyon et al., 2016; Bottiani et al,

2014; Voight et al., 2015). As it stands, mirroring the demographics of the U.S., teachers that comprise the education workforce are predominantly White. Racial and ethnic minority educators make up fewer than 20% of teachers in this country, while there is a rising number of minority students, especially in urban public school districts (Cherng & Halpin, 2016). Subsequently, this growing demographic divide, where students are of a racial or ethnic minority and teachers are White, may further perpetuate inequitable environments for minoritized students.

An additional factor that may contribute to the maintenance of these inequitable environments is that teachers are often under prepared by their graduate educations to effectively teach students who do not look like them (Mayorga & Picower, 2018; Sleeter, 2016, 2017). In a theoretical review, Mayorga and Picower (2018) highlighted the persisting Eurocentricity of many teacher education programs that continue to perpetuate White supremacy. The authors argue that teacher education programs fail to center the role of race and racism in their students' experiences, as well as failing to truly unpack Whiteness, privilege, and how they all collide in the classroom. As such, Black students are often slighted by the educational system, evidenced by the pervasiveness of the school-to-prison pipeline and the racist underpinnings of standardized assessments (Davis & Martin, 2018; Schiff, 2017). However, these disadvantageous circumstances are not only broad and systemic, but extend into the person-to-person interactions that take place in the school (Finn & Servos, 2014). Finn and Servos (2014) asserted that teachers' explicit and implicit biases inherently deprive students most in need of structure, instruction time, and the opportunity to build

relationships with caring, competent adults.

The pervasive negative stereotypes that teachers may hold about minority students can significantly undermine the relationship between teachers and students, and thus contribute to poor outcomes among students of color. A longitudinal study found that White teachers perceived good grades received by Black students differently than those received by White students: teachers believed that the Black students put in less effort and were less attentive than their White peers (Downey & Ainsworth-Darnell, 2002). A meta-analysis by Tenenbaum and Ruck (2007) concluded that teachers have higher expectations of White and Asian American students and lower expectations of Latino and Black students. Further, teachers had a tendency to provide more direct positive feedback (encouragement/praise) and fewer negative referrals to their White students than their Black and Latinx students (Tenenbaum & Ruck, 2007). A longitudinal study found that teachers are more likely to underestimate the academic abilities of minority youth and that these underestimates are related to minoritized youth developing lower expectations for their own academic success (Cherng, 2015, 2016; Ferguson, 2003).

Discipline gap. The ongoing disparities observed in the racial achievement gap are compounded by inequities in how discipline is enacted in schools. Removal from classroom and school settings as a punishment for perceived misbehavior (i.e., exclusionary discipline) denies students the opportunity to learn. Receiving the brunt of this disadvantage are students of color, as there is an overrepresentation of minoritized students receiving disciplinary infractions. According to the U.S. Department of

Education Office for Civil Rights (2014) report, Black boys were suspended at three times the rate of their White male counterparts, while Black girls were suspended at six times the rate of White girls. These statistics highlight this disproportionality in school discipline practices. Crenshaw and colleagues (2015) also documented the disparity by showing that Black girls accounted for approximately 60% of girls suspended or expelled in Boston, MA despite making up only 28% of the population of school attendees. Moreover, Black students are more likely to be more harshly disciplined for subjective, minor offenses and offenses without a standard course of punitive action, such as disrespect. Behaviors that are more strongly influenced by teachers' subjective perceptions (i.e., what is considered "disrespectful") as opposed to more serious offenses (e.g., bringing a weapon to school) allow teachers more flexibility in their approach to discipline (Fabelo et al., 2011; Kunesh & Noltemeyer, 2019; Skiba et al., 2002). Therefore, teachers may engage in harsher punishment with minoritized students as a result of their own biases in the more ambiguous instances of misbehavior, as teachers' unfavorable beliefs about students of color may be activated.

These experiences of systemic exclusion can breed mistrust in teachers and the institution as a whole (Amemiya et al., 2019) by students of color and may lead to minority students' withdrawal and disengagement from the larger school context, physically and mentally (Balfanz et al., 2014; Huang & Anyon, 2020; Quin, 2017). This disengagement is negatively correlated with school completion, as students become increasingly less likely to graduate with each additional suspension (Balfanz et al., 2014; Gregory et al., 2015). In a study exploring the relationship between academic

achievement and school discipline, researchers found that about one-fifth of the difference in achievement between Black and White students can be attributed to the disproportionate distribution of suspensions (Morris & Perry, 2016). Further, researchers exploring the long-term effects of inequitable discipline patterns found that schools with a high number of suspensions and overreliance on exclusionary discipline practices had an inverse relationship with reading and math achievement among all students in the school, regardless of whether they personally had been suspended (Perry & Morris, 2014). In a study examining the discipline gap from students' perspectives in three high schools in central New York, students' responses provided a more holistic view of the issue (Pena-Shaffa et al., 2019). Rather than focusing on objective measures of the discipline gap (i.e. discipline records and formal infractions), this study explored students' perceived differential treatment based on racial group membership. Pena-Shaffa et al. (2019) found results consistent with previous research in that student race was as a significant contributor to perceived inequity in the distribution of suspensions. Among Black students, perceived differential treatment was a significant predictor of their perceptions of school climate. Black students tended to perceive the school climate as generally less supportive, less respectful of diversity, and less safe (Pena-Shaffa et al., 2019). Additionally, the racial discipline gap also may be detrimental for White students (Anyon et al., 2016). Students of all racial groups reported less connectedness to the adults in their high school when there was a greater discipline gap between Black and White students. This suggests that the environment

created by discipline inequity is associated with a lack of trust, respect, and compassion for all students (Anyon et al., 2016).

Findings also have demonstrated teachers' tendencies to view negative behaviors of minoritized youth as stable and internal rather than simply situational misbehavior. When presenting participants with vignettes, Okonofua and Eberhardt (2015) found that teachers were more likely to label Black students as "troublemakers" who were likely to continue engaging in misbehaviors than they were to label White students as "troublemakers" when they were described as engaging in the same behaviors. This belief that the Black student is bound to misbehave again also led teachers to desire a harsher punishment for the Black students than the White students to deter assumed future misbehaviors. In a sample of preservice teachers, researchers found that after reviewing a vignette about a misbehaving student, the majority White group of future educators were more likely to perceive a Black male student as being likely to misbehave in the future as compared to the vignette with the White male student, despite describing the same behavior (Kunesh & Noltemeyer, 2019). This suggests that preservice teachers hold beliefs about innate characteristics of Black males that significantly differ from the beliefs they hold about White students, as they were more likely to view Black students' behaviors as reflecting stable personality characteristics. Understanding this misbehavior as a function of innate traits may reflect preservice teachers' *essentialist* thinking and warrants further exploration.

The harmful associations between preservice and inservice teachers' stereotyping behaviors and biases and poorer outcomes for minoritized students

indicate the need for further research on the factors that contribute to the development and maintenance of these attitudes and behaviors in teachers.

Race Essentialism

One such factor may be race essentialism. Race essentialism is the belief that there are deep-rooted, unalterable traits and abilities unique to each racial group (Gelman, 2004). Beliefs regarding race lie on a spectrum, with essentialism and constructionist views existing on opposing ends. Essentialism emerges from a basic human need for categorization and the tendency to explain patterns based on inherent properties believed to be shared by a group (Cimpian & Salomon, 2014). People who endorse essentialist beliefs “hold that racial groups possess an underlying essence (biological or genetic) that represents deep-seated and unalterable properties indicative of traits and abilities” (Tadmor et al., 2013, p. 99). Alternatively, individuals who hold nonessentialist beliefs consider racial categories malleable and socially constructed, changing with time, and thus more indistinct (Tadmor et al., 2013).

While race essentialism has not been studied in the school setting, it has been shown to correlate with constructs such as stereotyping, intergroup closeness, and memory. Furthermore, Rhodes et al. (2018) found that inducing race essentialist beliefs led to increases in discrimination and prejudice. Teachers’ endorsement of race essentialist beliefs may directly relate to harmful beliefs they hold about their minoritized students. These held beliefs likely play a role in the interactions between White teachers and their minoritized students, as evidenced by the literature on teacher beliefs and subsequent behaviors and their students’ outcomes (Cherng, 2016;

Tenenbaum & Ruck, 2007). Exploring race essentialism in these relationships may shed additional light on why minoritized students generally have poorer school experiences. The body of research on race essentialism broadly is briefly reviewed in the following sections.

Stereotyping and prejudice. Essentialist beliefs are closely interwoven with stereotyping and prejudices (Haslam & Whelan, 2008). Early research on this construct conducted by Yzerbyt et al. (1997) posited that essentialism promotes stereotyping and stereotyping promotes essentialist thinking. Levy and Dweck (1999) further showed that race essentialism is positively correlated with stereotyping, wherein those individuals high on essentialism are more likely to engage in racial stereotyping. Essentialism leads individuals to believe not only that group differences are due to immutable and inherent factors, but that these differences exist only between groups. People tend to perceive all members of the out-group as similar to each other but meaningfully dissimilar from the in-group (Mandalaywala & Rhodes, 2016; No et al., 2008). These beliefs in biological distinctness often contribute to the dehumanization of the out-group (Leyens, et al., 2001). For example, in a study examining the climbing rates of police brutality toward Black males, researchers asserted that essentialism was strongly related to intergroup interactions and played a role in the decision to use lethal force in police encounters with Black suspects (Goff et al., 2014; Tawa, 2022). Using a virtual reality simulation, physiological stress was associated with excessive and lethal force use among participants higher on race essentialism (Tawa, 2022).

Trust and closeness. Prior research has highlighted the association between essentialist beliefs and constructs such as trust and closeness between members of different racial groups (e.g., Kung et al., 2018; Pauker et al., 2018). Trust, or “positive expectations of the intentions or behavior of another” (Rousseau et al., 1998, p. 395), serves as a foundational component of conflict resolution and social harmony (Kung et al., 2018). It is well established that individuals less readily extend trust to, and subsequently help, those they perceive as broadly unrelated to them as opposed to those they recognize as “kin” (DeBruine, 2002; Kruger, 2003). Distrust between racial and social groups is tightly woven into the fabric of the United States. This is evident both historically (e.g., slavery and Japanese internment camps during WWII) and presently (e.g., police murders of unarmed Black people and concentration camps along the southern United States border). Believing there is a biological difference between racial groups maintains the distrust and disinterest in forming close relationships with those in the outgroup.

Essentialism can dampen the desire to interact with and advocate for those in racial outgroups (e.g., Donovan, 2017; Pauker et al., 2018). Donovan (2017) found that race essentialism was significantly negatively associated with middle school students’ desire to form cross-racial relationships. Students in grades 7-9 read an excerpt from a biology textbook discussing genetic diseases that either used racialized language or the same lesson lacking racial language. Not only were essentialism beliefs stronger among students in the racialized language condition, students higher on race essentialism also were significantly less interested in forming relationships with their classmates of

different races. More notably, the students assigned to the racialized language condition reported less support for policies to reduce racial inequity in education (Donovan, 2017). A study by Williams and Eberhardt (2008) yielded similar results with undergraduate students high on essentialism demonstrating increased acceptance of racial inequities and disinterest in interacting with racial outgroup members.

Memory. In viewing individuals of different races as the outgroup, people are categorizing outgroup members as distinct from the self. One consequence of this categorization is that people have poorer memory for outgroup faces (e.g., Meissner & Brigham, 2001). Gaither and colleagues' (2014) study was consistent with these results since they found that White children high on race essentialism had poorer memory for clear outgroup members (Black people) and racially ambiguous individuals than White children who demonstrated less essentialist beliefs. These results suggest that as White children begin to develop more essentialist beliefs, they may become more rigid in their categorization of racially ambiguous individuals as distinct from their in-group despite phenotypic similarities. Children lower on essentialism demonstrated better memory of faces across races whether those were for in-group or outgroup members (Gaither et al., 2014). Similarly, in a study examining the effects of the use of labels for racially ambiguous faces on recognition memory, White and Asian participants were better at remembering the faces of those labeled as the in-group as compared to those labeled outgroup despite faces in both groups being racially ambiguous (Pauker & Ambady, 2009). Thus, "essentialist mindsets hinder memory and the recognition of faces of outgroup members; they homogenize the representations of the different others" (Chao

& Kung, 2014, p.91). White teachers, if high on essentialism, may homogenize their students of color, as well, with poor memory of outgroup members likely extending to the school context.

Race Essentialism and Teacher Beliefs and Attitudes

While race essentialism has been well researched in social psychology, the concept has not been examined in the school context. However, the implications of holding race essentialist beliefs demonstrate the importance of examining race essentialism in this critical developmental context, and particularly in regard to teachers' beliefs and attitudes about discipline and equitable teaching practices. Given the findings in related research on teacher-student relationships and attitudes and behaviors associated with essentialist beliefs, there may be a correlation between White teachers' essentialist beliefs (innate characteristics prescribed to race) and how they approach discipline and relationship building with their students of color. There are barriers to some White teachers developing and sustaining mutually positive relationships with their minority students (Cherng, 2015; Downey & Ainsworth-Darnell, 2002; Tenenbaum & Ruck, 2007), and the effects of these barriers are outlined in research focusing on the racial school climate, achievement, and discipline gaps (Gregory et al., 2016; Voight et al., 2015). Race essentialism has been linked to a variety of poor outcomes such as stereotyping, racial prejudice, less close relationships with individuals outside of one's own racial group, and poorer memory for outgroup members (Chao et al., 2013; Gaither et al., 2014; Williams & Eberhardt, 2008). Given that essentialism fosters category-wide generalizations and exaggerates similarities within

groups, essentialism may lead White teachers to group all Black or minority children together based on negative experiences they may have had with particular students (Andreychik & Gill, 2015). This may prevent them from forming strong relationships with their students of color and lead to the use of more punitive discipline practices. Prejudices influence behaviors (e.g., Donovan, 2017), and it is likely that even without teachers' awareness or verbalization of such beliefs, students may still perceive a level of distrust, discomfort, disdain, or unjust treatment. Essentialism facilitates the painting of minorities with broad strokes, prohibiting the relationship building necessary to fostering an enduring connection between White teachers and their students of color.

Further, exploring race essentialism in an educational context with preservice teachers also would serve to better understand future teachers' beliefs and attitudes before they begin teaching. Preservice teachers have long provided an accessible and meaningful sample for studying educational environments and phenomena (Glock & Karbach, 2015; Milner, 2006; Shah & Coles, 2020). In addition to being a more convenient sample for academic researchers, studying preservice teachers provides opportunities for developing meaningful interventions and shaping curricula to target issues around race and biases (Milner, 2006). Prior research has shown that White preservice teachers are not immune to holding biases and engaging in stereotyping thinking and behaviors, as demonstrated by the research underscoring the role of these beliefs in disparities in disciplinary practices (Glock & Karbach, 2015; Kunesh & Noltemeyer, 2019). Essentialist beliefs that preservice teachers hold may lead to prejudice by impacting how they respond to new negative information about an

individual from a marginalized group and perceive their work with minoritized youth, more broadly. A case study by Martell (2017) highlighted that preservice teachers often feel underprepared when confronted with issues of race in the classroom. Shah and Coles (2020) asserted that teacher education needs to be race-focused and actively engage in building an understanding of how race and racism shape preservice teachers' experiences and the experiences of their students both in their training and practice. Beginning to examine if and how conceptualizations of race are related to inequitable discipline practices, beliefs about minoritized students, and constructs associated with optimal student outcomes (i.e., growth mindset and empathy) may provide helpful insight into how to create an antiracist teacher force.

Creativity and growth mindset. There is an inherent inflexibility to the essentialist lay theory of race (Tadmor et al., 2013) that is problematic given that cognitive flexibility is associated with an array of positive outcomes such as creativity, openness, and effective problem-solving (Tadmor et al., 2012; Ward et al., 1999). Essentialism, however, dampens creativity and leads individuals to be closed-minded or to have a more fixed mindset (Tadmor et al., 2013; Pauker et al., 2018). This was demonstrated in a study of White college students attending university in Hawai'i, which is a geographic region where multiracial identities are more common. White students not only exhibited reduced essentialism but increased cognitive flexibility as well. Lower race essentialism at the first time point was associated with higher levels of cognitive flexibility one year later. In another study demonstrating the impact of essentialism on creativity and flexibility, further support was provided for the inverse

relationship (Tadmor et al., 2013). After manipulating essentialism using a priming article (No et al., 2008), Jewish-Israeli undergraduates in both the nonessentialism and no-prime control conditions were better able to solve a measure of creativity (the Remote Associates Test; Mednick, 1962) as compared to those in the essentialist condition.

Relatedly, in education, a fixed mindset is also associated with negative outcomes, whereas a growth mindset is more advantageous for both students and teachers (Dweck, 2008; Masters, 2013). A growth mindset refers to the belief that human abilities can improve with effort (Dweck, 2008). It is beneficial for students to operate from this framework as it may allow them to believe that they can learn more, even with difficult subject matter. Previous research has shown that teachers have begun to apply a growth mindset approach as it applies to their students' learning (Masters, 2013). However, teachers may also benefit from utilizing a growth mindset in their approach to forming and maintaining positive relationships with their students (Dweck, 2008). In regard to building relationships with students, Muller (2001) posits that teachers are more likely to foster relationships with students who are more dedicated to school and less likely to nurture relationships with those students who are disengaged and may benefit the most from these supportive relationships. Teachers' beliefs that they can foster relationships with their most difficult students may be linked to more positive student outcomes, but less research has focused on examining teachers' own growth mindset beliefs regarding relationships with their students (Dweck, 2008). White teachers lower on essentialist perceptions of race may be more

likely to have a growth mindset and extend trust and opportunity for progress, as opposed to holding beliefs that their students have fixed personality traits that inhibit growth.

Empathy. Empathy, or the capacity for understanding others' views and experiences, is critical for cultivating strong positive teacher-student relationships. Suldo and colleagues (2009) offered insight into the qualities that students view as most salient for teachers. They asked sixth, seventh, and eighth grade students "How can you tell teachers care about you?" The most frequent themes described teachers' empathy and interest in student wellness. For instance, one student provided the example of having a teacher inquire about negative changes in their students' moods. Modeling empathy and compassion also led to students' increased feelings of social and emotional support in school (Suldo et al., 2009). Okonofua and colleagues (2016) further examined the link between teachers' empathy and student outcomes by exploring the positive impacts of introducing a brief empathy-based intervention for secondary teachers. First, researchers found that teachers were susceptible to a mindset manipulation encouraging more empathic responses to disciplinary infractions. Next, researchers demonstrated via an imaginal vignette that students felt more respected and were less likely to misbehave following a teacher's empathic response to misbehavior. Lastly, they found that a brief online intervention aimed at increasing teachers' capacities to hold an empathic mindset was successful, which was evidenced by a 50% decrease in exclusionary punishment over an academic year (Okonofua et al., 2016).

Empathy also plays a key role in intergroup interactions. Racial incongruence can reduce the likelihood of extending empathy to outgroup members, which may lead to dehumanization and decreased willingness to help those dissimilar to oneself (Salanga & Bernardo, 2017). While the constructs of empathy and race essentialism have not been explicitly studied in tandem, given the implications of higher race essentialism, such as distrust for outgroup members, decreased closeness, stereotyping, and prejudice, it may be important to explore the nature of their relationship, especially in regard to inequitable discipline practices (Donovan, 2017; Goff et al., 2014; Pauker et al., 2010).

Malleability of Race Essentialism

The malleability of race essentialism has been demonstrated in several studies (Donovan 2017; Pauker et al., 2018; Tawa, 2016). Donovan et al. (2021) suggests that specific types of scientific literacy may be helpful in swaying conceptualizations of race to be more constructionist:

Humane genomics literacy is standard genomics literacy that is structured to refute essentialist thinking. It is the knowledge of how multifactorial genetics and population thinking refute the assumptions of genetic essentialism. This knowledge is humane because it is oriented toward reducing racism. (p.526)

After participating in a single-class interactive computerized intervention on understanding the lack of genetic variation between racial categories, high school students were lower on essentialist beliefs than their classmates who participated in the control condition (Donovan et al., 2021). Findings suggest that the way we learn about race has significant implications for the meaning we assign to racial categories. Tawa (2016) found that following just a daylong workshop on race conceptualization, where

attendees “unlearned” essentialism and fostered constructionism, produced marked reduction in essentialist beliefs, with changes retained at a six-week follow up. Tawa (2020) found that after watching a 10-minute video on the social construction of race, adult participants showed an increase in sociopolitical construction of race beliefs and a decrease in race essentialism. These findings are important because in cross-racial interactions individuals who hold more social constructionist beliefs as opposed to essentialism are more interested in forming connections with and deepening their understanding of those from different racial groups (Yao et al., 2019). Notably, those holding constructionist beliefs are more motivated to seek acceptance from other racial groups, perceive less distance, and demonstrate more interest in discussing sensitive racial issues (Tawa, 2016; Williams & Eberhardt, 2008; Verkuyten & Brug, 2004). Studies of the malleability of race essentialism can contribute to better understanding teacher-student relationships. For example, if preservice teachers are taught to think of race in a constructionist way, they may approach their relationships with minoritized students differently.

Current Project

Bridging the study of school discipline practices and race essentialism could have substantial implications for racial and ethnic minority students. Positive and supportive school-based relationships have immense benefits for students, including promoting resilience and wellbeing (Martin & Collie, 2018; Rudasill et al., 2010; Yeung & Leadbeater, 2010), which underscores the importance of identifying beliefs that

contribute to the development and maintenance of these relationships. The current project aimed to address this gap by:

1. Examining the reliability and validity of a race essentialism measure in the education context.

2. Investigating whether preservice teachers' race essentialism was associated with perceptions of Black students' behavior and appropriate discipline strategies on a vignette portraying a middle-school student implied to be either Black or White engaging in misbehavior in a classroom.

3. Investigating whether teachers' race essentialism was associated with perceptions of Black students' behavior and appropriate discipline strategies on a vignette portraying a middle-school student implied to be either Black or White engaging in misbehavior in a classroom.

4. Examining whether manipulating race essentialist beliefs affect preservice teachers' perception of appropriate discipline for and attributions of minoritized students' behavior on a vignette portraying a middle-school student implied to be either Black or White engaging in misbehavior in a classroom.

In brief, the current project explored how preservice and inservice teachers' intrinsic beliefs about race and subsequently, their minoritized students, may perpetuate a harmful environment characterized by racial discipline gaps. Notably, the data collection for the projects began in fall semester of 2020 following a summer of increased racial tensions and awareness.

Study I

Currently, there is no gold standard measure for assessing race essentialism. In recent years, there has been a concerted effort to both develop new measures and validate short-form versions of commonly-used scales. One of the more widely-used measures of race essentialism is the Race Conceptions Scale (RCS; Williams & Eberhardt, 2008). The RCS (Williams & Eberhardt, 2008) demonstrated strong internal consistency ($\alpha = .79$) and convergent validity with related constructs (e.g. higher endorsement of essentialist beliefs was associated with greater preference for hierarchy in society on a social dominance orientation scale). Young et al. (2013) adapted and validated a short-form, 10-item version of the RCS, which had strong internal consistency as well ($\alpha = .84$). Pauker and colleagues (2018) also found strong relationships among the standard form RCS, social dominance orientation, and modern racism. Additionally, a statistically significant decrease in essentialist beliefs among White first-year undergraduate students at a Hawaiian university over the course of the academic year was associated with decreases in the other constructs, attributed to increased exposure to diversity. However, as discussed above, race essentialism has not been directly assessed in an education context. Moreover, the historical events regarding racial relationships and tension over the summer of 2020 in the U.S. may have affected people's beliefs about race, as people became more intensely aware of the social ramifications of being minoritized in this country. Consequently, it was important to assess whether the RCS (Williams & Eberhardt, 2008) remains a reliable and valid measure of race essentialism.

Therefore, the primary goal of the first study was to examine the psychometric properties of the RCS (Williams & Eberhardt, 2008) by assessing its reliability (internal consistency) and convergent validity (i.e., associations with related constructs). The first study also explored relationships among race essentialism, beliefs about discipline practices, and empathy in a general (non-educator) sample using a vignette that describes an ambiguous misbehavior by either an implied Black student or an implied White student (Kunesh & Noltemeyer, 2019).

Questions and Hypotheses

Question #1 Will the measure of race essentialism demonstrate acceptable reliability (as evidenced by coefficient alpha) and convergent validity (as evidenced by significant associations with the endorsement of racist and social hierarchy beliefs)?

Hypothesis: Race essentialism will demonstrate an acceptable ($> .70$) level of internal consistency and will be positively correlated with variables found to be associated with race essentialism in prior psychometric studies (Neville et al., 2000; Williams & Eberhardt, 2008): modern racism, social dominance orientation, color-blindness, and external motivations to act in nonprejudiced ways, and negatively correlated with internal motivations to act in nonprejudiced ways.

Question #2 Is empathy negatively associated with race essentialism in a general sample? *Hypothesis:* Higher race essentialism will be negatively correlated with empathy, as empathy also has been associated with intergroup relationships.

Question #3 Will higher race essentialism be associated with greater perceived likelihood of reoccurrence of misbehavior on a vignette in which a student is implied to

be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be associated with greater perceived likelihood of reoccurrence of misbehavior in among participants in an implied Black student condition.

Question #4 Will higher race essentialism be associated with increased perceived inappropriateness of misbehavior on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be associated with increased perceived severity of misbehavior among participants in an implied Black student condition.

Question #5 Is race essentialism uniquely predictive of a) perceived likelihood of reoccurrence of misbehavior and b) perceived inappropriateness of misbehavior after accounting for empathy and social desirability? *Hypothesis:* Race essentialism will be a unique predictor of behavior stability and perceived inappropriateness of misbehavior.

Methods

Approval from Marquette University's Institutional Review Board was received prior to initiating the project.

Participants. The participants in Study I were 282 undergraduate students from Marquette University. The sample was predominantly female, 79%, White, 64%, and in their first year of undergrad, 61%.

Table 1. Demographic Variables for Study I

Sex, <i>n</i> (%)	
Female	216 (78.8%)
Male	52 (19%)
Intersex	1 (.4)
Prefer not to answer	5 (1.8)
Race ^a , <i>n</i> (%)	

Black or African American	27 (9.6%)
Latino/Hispanic	53 (18.8%)
White	181 (64.2%)
Asian	31 (11.0%)
Middle Eastern	2 (.7%)
American Indian, First Nation, Indigenous, Alaskan Native	5 (1.8%)
Native Hawaiian or Other Pacific Islander	2 (.7%)
Year in college, <i>n</i> (%)	
1 st	166 (60.6%)
2 nd	53 (19.3%)
3 rd	30 (10.9%)
4 th	25 (9.1%)

Note. *n* = 282. Participants selected each race that applied.

^a Participants selected each race that applied.

Procedure. Marquette University undergraduate students were recruited via the Department of Psychology undergraduate research pool. Participants completed a questionnaire via Qualtrics, which is a secure and encrypted online survey site. They were asked to read a vignette (see Appendix A) that told them to imagine they were a teacher in a seventh-grade math class. The vignette described an ambiguous misbehavior by a seventh-grade student in which the student refused to complete an assignment. Participants were in one of two conditions. In Condition 1, the student's name in the vignette was a stereotypically Black name (i.e., Darius), while in Condition 2 the student had a stereotypically White name (i.e., Cody). Name selection was supported by pilot data from Kunesh and Noltemeyer (2019). After reading the vignette, participants immediately responded to follow-up items assessing the perceived inappropriateness of the behavior, the perceived likelihood of the behavior reoccurring (stability), and the appropriate punishment response (severity). Participants responded to these items on a Likert scale (Kunesh & Noltemeyer, 2019). Participants were compensated with extra credit for their participation.

Measures. The presentation of the following measures (see Appendix A) was counterbalanced.

Race essentialism. Race essentialism beliefs were assessed using the Race Conceptions Scale (RCS; Williams & Eberhardt, 2008), which is a 22-item questionnaire that assesses whether individuals hold beliefs that race is biologically based. It measures the extent to which the responder believes that race is biological, natural, easily discernable, and stable across time and contexts (Williams & Eberhardt, 2008). Participants respond to items (e.g. "Racial groups are primarily determined by biology.") on a 7-point Likert scale ranging from *Strongly disagree* to *Strongly agree*. An average score of the items was computed with higher scores representing greater endorsement of race essentialists beliefs.

Initially, a 10-item short-form version was used in Study 1 (Young et al., 2013). The short form had demonstrated adequate internal consistency, $\alpha = .84$, in previous research (Young et al., 2013). In a pilot study conducted by the researcher for the current project, the 10-item version showed weak internal consistency, $\alpha = .61$. Therefore, a second wave of data was collected using the full 22-item measure. Analyses were conducted only with the sample of participants ($N = 282$) who completed the 22-item questionnaire.

Modern racism. The Modern Racism Scale (MRS; McConahay, 1986) was used to assess attitudes and displays of covert, modern racism. In previous research, the score from this measure was correlated with a measure of race essentialism (Pauker et al., 2018). Participants responded to seven belief statements on a 5-point Likert scale

ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Examples include “Discrimination against blacks is no longer a problem in the United States” and “Blacks are getting too demanding in their push for equal rights.” The average was calculated and used for analyses. Higher scores indicated greater displays of modern racism. Acceptable internal consistency was demonstrated, $\alpha = .81$.

Social dominance orientation. Social Dominance Orientation scale (SDO; Ho et al., 2015; Pratto et al., 1994) was used to assess participants’ degree of preference for a social hierarchy and inequality among social groups. The 16-item scale included statements such as “An ideal society requires some groups to be on top and others to be on the bottom” and “Group equality should be our ideal” (this item was reverse coded). Participants responded on a 7-point Likert scale ranging from 1 (*Strongly oppose*) to 7 (*Strongly favor*). The average of the items was calculated. Higher scores indicated greater endorsement of a social hierarchy. Adequate internal consistency for the sample was demonstrated, $\alpha = .87$.

Color-Blind Racial Attitudes. The Color-Blind Racial Attitudes Scale (CoBRAS; Neville et al., 2000) was used to assess attitudes related to racial color blindness ideology across three areas: Racial Privileges, Institutional Discrimination, and Blatant Racial Issues. Participants responded on a 6-point Likert scale of 1 (*strongly disagree*) to 6 (*strongly agree*) to 20 items. The scale includes items such as “Everyone who works hard, no matter what race they are, has an equal chance to become rich” and “Social policies, such as affirmative action, discriminate unfairly against White people.” Higher

scores indicate greater levels of racial blindness. Acceptable internal consistency was demonstrated in the current sample, $\alpha = .90$.

Internal and External Motivation to Respond without Prejudice. Internal and External Motivation to Respond without Prejudice Scales (Plant & Devine, 1998) was used to assess the source of motivation for acting in nonprejudiced ways. Two scales measure motivation to respond without prejudice toward Black people. The 10-item measure includes two subscales: internal motivation (e.g., “Because of my personal values, I believe that using stereotypes about Black people is wrong.”) and external motivation (e.g., “I attempt to appear nonprejudiced toward Black people in order to avoid disapproval from others.”). Each subscale included five items measured on a 1 (*strongly disagree*) to 9 (*strongly agree*) Likert scale. Acceptable internal consistency was demonstrated for both subscales ($\alpha = .76$, and $\alpha = .74$, respectively).

Empathy. Participants responded to the Toronto Empathy Questionnaire (TEQ; Spreng, et al., 2009), which is a self-report measure of empathy. It is a 16-item scale (e.g. “When someone else is feeling excited, I tend to get excited too.”) with responses on a 5-point Likert scale ranging from *Never* to *Always*. In previous studies, the measure had high internal consistency (i.e., $\alpha = .87$) and strong test-retest reliability (Spreng et al., 2009). The measure also demonstrated strong convergent validity with other measures of empathy, and scores were not associated with measures assessing relevant autism spectrum disorder symptomology (Spreng et al., 2009). For data analysis, the average score for the scale was computed with higher scores representing greater

empathy. Acceptable internal consistency was demonstrated in the current sample, $\alpha = .82$.

Social Desirability. Social desirability was assessed using Marlowe-Crowne Social Desirability Scale-Short version (MCSDS; Crowne & Marlowe, 1964; Reynolds, 1982). The scale includes 13 true-false items (e.g., "I sometimes feel resentful when I don't get my way"). The total score was used, with higher scores indicating greater social desirability. The reported reliability of this form has been acceptable ($\alpha = .76$; Reynolds, 1982). Acceptable internal consistency was demonstrated in the current sample, $\alpha = .71$.

Results

The RCS (Williams and Eberhardt, 2008) full scale had an acceptable internal consistency of $\alpha = .76$. After descriptive analyses (Table 2), correlational analyses were conducted to answer the first two research questions regarding the convergent validity of the race essentialism measure, i.e., associations between race essentialism and each of the variables of interest, (i.e., modern racism, social dominance orientation, color-blindness, external and internal motivations to act in nonprejudiced ways, and empathy). Further correlational analyses were conducted to answer the last two research questions regarding whether race essentialism was associated with perceived stability and severity of the behavior described in the vignette. Hierarchical linear regressions were conducted to investigate the exploratory question of whether race essentialism was uniquely predictive of behavior stability and severity.

Correlational analyses were conducted to test the research hypotheses in Study I regarding the association between race essentialism and modern racism, social

dominance orientation, color-blindness, external and internal motivations to act in nonprejudiced ways, and empathy. As shown in Table 2, participants who endorsed more essentialist beliefs reported greater endorsement of social dominance orientation, $r = .17, p = .01$, modern racism, $r = .24, p = .00$, and colorblind ideology, $r = .245, p = .00$. Race essentialism also was positively correlated with external motivation to act in nonprejudiced ways, $r = .13, p = .03$, but negatively correlated with internal motivation, $r = -.13, p = .03$. Race essentialism was not associated with empathy.

Turning to the association of the RCS with perceptions of student behavior in the vignette, results showed that race essentialism was significantly correlated with perceived severity of the misbehavior in the condition with the implied Black student, with those higher on race essentialism perceiving *Darius'* behavior as more inappropriate, $r = .21, p = .01$). The RCS was not correlated with the perceived severity of the implied White student's behavior. The RCS was not correlated with perceived behavior stability for either the implied Black or the implied White student condition. The linear regression model accounting for empathy and social desirability did not show race essentialism to be a unique predictor of participants' perceived severity or stability of student behavior in either condition. See Table 3 for the model. Altogether, the findings of Study I suggest that the full-scale RCS continues to demonstrate strong internal consistency and convergent validity with constructs associated with attitudes and beliefs about race. Notably, race essentialism also was associated with participants' perceived inappropriateness of perceived misbehavior on a hypothetical vignette, but only among those participants in the implied Black student condition.

Table 2. Descriptive Statistics and Correlations among Study I Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Race essentialism	-										
2. Modern racism	.24**	-									
3. Social dominance orientation	.17**	.57**	-								
4. Colorblindness	.25**	.70**	.62**	-							
5. External motivation for non-prejudice	.13*	.27**	.17**	.25**	-						
6. Internal motivation for non-prejudice	-.13*	-.52	-.53**	-.51**	-.04	-					
7. Empathy	-.08	-.29**	-.39**	-.32**	-.12*	.38**	-				
8. Inappropriateness of behavior (Darius)	.21**	.10	-.03	.04	.06	-.04	.03	-			
9. Likelihood of reoccurrence (Darius)	.12	-.08	-.14	-.05	.14	-.20*	.21*	.17*	-		
10. Inappropriateness of behavior (Cody)	.16	.10	.07	.16	.13	.09	-.12	-	-	-	
11. Likelihood of reoccurrence (Cody)	.02	-.06	.02	.09	.04	.05	-.05	-	-	.11	-
N	282	277	274	273	276	276	281	142	142	140	140
M	4.25	1.73	2.17	2.32	5.27	7.99	4.10	3.68	4.27	3.58	4.24
SD	.58	.60	.82	.72	1.64	1.18	.39	.80	.89	.73	.95
Range	2.7-5.9	1-4	1-4.8	1-4.7	1-9	2-9	3-5	1-5	1-6	1-5	1-6

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 3. Summary of Linear Regression Analyses for Race Essentialism Predicting Inappropriateness of Misbehavior and Likelihood of Reoccurrence in Study I

Predictor	Inappropriateness					Stability				
	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p
Model 1	.00			.08	.92	.05			3.41*	.04
Social Desirability			-.00		.10			-.11		.18
Empathy			.04		.69			.20		.02
Model 2	.05	.04		2.14	.10	.06	.02		3.13*	.03
Social Desirability			-.02		.86			-.11		.15
Empathy			.06		.52			.21**		.01
Race Essentialism			.21**		.01			.13		.12

* $p < .05$. ** $p < .01$. *** $p < .001$

Study II

Given the limitations of drawing conclusions from a sample not involved in education, Study II sought to explore similar patterns of associations among a sample of undergraduate students training to be teachers (i.e., preservice teachers). Moreover, Study II investigated whether teacher-specific racial attitudes, beliefs, and practices were associated with race essentialism. In prior studies, teachers' multicultural teaching beliefs were associated with more positive views of working with minoritized students, while egalitarian, or more colorblind, attitudes had been associated with poorer self-efficacy and enthusiasm for working with diverse youth (Hachfeld et al., 2015). Similarly, a fixed mindset has had poorer outcomes for cross-racial relationships (Pauker et al., 2018). Therefore, it was worthwhile to explore how race essentialism related to these attitudes among preservice teachers.

Questions and Hypotheses

Question #1 Will higher race essentialism be associated with a) more prejudiced beliefs about minoritized students, b) higher egalitarian teaching beliefs, c) less self-efficacy d) less enthusiasm for teaching minoritized students, and e) lower multicultural teaching beliefs? *Hypothesis:* Race essentialism will be positively correlated with prejudiced and egalitarian beliefs, while being negatively correlated with self-efficacy and enthusiasm for working with minoritized students, and multicultural teaching beliefs.

Question #2 Are a) growth mindset and b) empathy negatively associated with race essentialism in a preservice teacher sample? *Hypothesis:* Higher race essentialism will be negatively correlated with growth mindset and empathy.

Question #3 Will higher race essentialism be associated with increased perceived likelihood of reoccurrence of misbehavior among participants on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be associated with increased perceived likelihood of reoccurrence of misbehavior in among participants in an implied Black student condition.

Question #4 Will higher race essentialism be associated with increased perceived inappropriateness of misbehavior among participants on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be associated with increased perceived severity of misbehavior among participants in an implied Black student condition.

Question #5 Will higher race essentialism be associated with more severe punishment of misbehavior among participants on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be positively associated with punishment severity of misbehavior among participants in an implied Black student condition.

Question #6 Is race essentialism uniquely predictive of a) perceived likelihood of reoccurrence of misbehavior, b) perceived inappropriateness of misbehavior, and c) punishment severity after accounting for growth mindset, empathy, and social

desirability? *Hypothesis:* Race essentialism will be a unique predictor of behavior stability, perceived inappropriateness of misbehavior, and punishment severity.

Methods

Approval from Marquette University's Institutional Review Board was received prior to initiating the project.

Participants. The participants in Study II included 66 undergraduate education majors. There was a range of 0-6 completed semesters in field placements among participants, $M = 2.27$, $SD = 1.8$. The majority of participants identified as female, 88% and White, 90%.

Table 4. Demographic Variables for Study II

Sex, n (%)	
Female	56 (87.5%)
Male	8 (12.5%)
Intersex	0 (0%)
Prefer not to answer	0 (0%)
Race ^a , n (%)	
Black or African American	0 (0%)
Latino/Hispanic	3 (4.5%)
White	60 (90%)
Asian	3 (4.5%)
Middle Eastern	0 (0%)
Alaskan Native	1 (1.5%)
Native Hawaiian or Other Pacific Islander	1 (1.5%)
Year in college, n (%)	
1 st	19 (29.7%)
2 nd	6 (9.4%)
3 rd	27 (42.2%)
4 th	12 (18.8%)

Note. $n = 66$.

^a Participants selected each race that applied.

Procedure. Marquette University and Concordia University undergraduate education majors were recruited via the Department of Education faculty at each institution. Participants followed same procedure for Study I. Participants were entered into a raffle for ten \$25 Amazon e-gift cards.

Measures. The presentation of the following measures (see Appendix B) was counterbalanced.

Race essentialism. Race essentialism beliefs were assessed using the 10-item short-form version (Young et al., 2013) of the Race Conceptions Scale (RCS; Williams & Eberhardt, 2008). The short form had an internal consistency of $\alpha = .84$ in Young et al. (2013). However, the 10-item version used in this study showed a level of internal consistency below that recommended for research use (reference), $\alpha = .63$. See Study I for a description of the RCS (Williams & Eberhardt, 2008).

Growth mindset. Four questions from the Faculty Growth Mindset subscale of the Panorama Instructing Staff Survey (Gehlbach, 2015) assessed participants' perceptions on the likelihood of teaching and teacher-student relationships improving over time (e.g., "How possible is it for teachers to change how well they relate to their most difficult students?"). Responses are on a 5-point Likert scale ranging from *Cannot increase/improve/change at all* to *Can increase/improve/change a tremendous amount*. The subscale had an internal consistency of $\alpha = .79$. For data analysis the average score for the scale was computed with higher scores representing greater growth mindset.

Empathy. Participants responded to the Toronto Empathy Questionnaire (TEQ; Spreng et al., 2009), which is a self-report measure of empathy. See Study I for a description of the measure. The measure had an internal consistency of $\alpha = .82$.

Teacher Cultural Beliefs. The Teacher Cultural Beliefs Scale (TCBS; Hachfeld et al., 2011) was used to assess participants' endorsement of multicultural and egalitarian (i.e., colorblind) beliefs in teaching. The response options ranged from 1 (*strongly disagree*) to 6 (*strongly agree*). The scale is comprised of two subscales, multicultural and egalitarian, with six and four items, respectively. The multicultural subscale includes items such as "In the classroom, it is important to be responsive to differences between cultures." It has an internal consistency of $\alpha = .91$. The egalitarian subscale included items such as "Schools should aim to foster and support the similarities between students from different cultural backgrounds," and had an internal consistency of $\alpha = .90$.

Prejudiced beliefs. Five items measured participants' agreement with prejudiced beliefs about minoritized students' motivation to engage in school (e.g., "Racial and ethnic minority students are usually less inquisitive than the other students"). The scale was adapted from Hachfeld et al. (2015). For data analysis the average score was computed with higher scores representing more prejudiced beliefs. The scale had an internal consistency of $\alpha = .92$.

Self-efficacy. Self-efficacy for teaching diverse students was assessed using a 4-item scale adapted from Hachfeld et al. (2015). Items included, e.g., "I am confident that I can address the various concerns of racial and ethnic minority students," and "I trust

myself to be able to adapt my lessons to the needs of students with a different background.” Participants responded on a 6-point Likert scale; 1 (*strongly disagree*) to 6 (*strongly agree*). For data analysis the average score was computed with higher scores representing greater self-efficacy. The scale had an internal consistency of $\alpha = .87$.

Enthusiasm. Enthusiasm for teaching diverse students was assessed using two items adapted from Hachfeld et al. (2015), “I enjoy working with students from different cultural backgrounds” and “I enjoy teaching racial and ethnic minority students.” Participants responded on a 6-point Likert scale; 1 (*strongly disagree*) to 6 (*strongly agree*). For data analysis the average score for the two items was computed with higher scores representing greater enthusiasm. These items had an internal consistency of $\alpha = .90$.

Social Desirability. Social desirability was assessed using Marlowe-Crowne Social Desirability Scale-Short version (MCSDS; Crowne & Marlowe, 1964; Reynolds, 1982). See Study I for a description of the measure.

Results

After descriptive analyses (see Table 5), correlational analyses were conducted to answer the first two research questions regarding the association between race essentialism and each of the variables of interest, (i.e., prejudiced beliefs, multicultural and egalitarian beliefs about teaching, self-efficacy and enthusiasm for working with minoritized students, growth mindset, and empathy). Further correlational analyses were conducted to answer the last three research questions regarding whether race essentialism was associated with perceived behavior stability and severity, and

harshness of the punishment. Hierarchical linear regressions were conducted to investigate the exploratory question of whether race essentialism was uniquely predictive of behavior stability and severity and punishment severity.

Correlational analyses were conducted to test the research hypotheses in Study II regarding the association between race essentialism and prejudiced beliefs, multicultural and egalitarian beliefs about teaching, self-efficacy and enthusiasm for working with minoritized students, growth mindset, and empathy. Due to the unacceptable internal consistency of the measure used to assess the construct, the correlations with race essentialism were uninterpretable. There also was no relationship between race essentialism and behavior stability, severity, or punishment severity among those participants in the implied Black student condition. The linear regression model (Table 6) accounting for empathy, growth mindset, and social desirability did not show race essentialism as a unique predictor for participants perceived severity, stability, or punishment of student behavior in the implied Black condition.

Table 5. Descriptive Statistics and Correlations among Study II Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Race essentialism	-													
2. Prejudiced beliefs	.20	-												
3. Egalitarian teaching beliefs	-.12	.04	-											
4. Multicultural teaching beliefs	-.18	-.21	.61**	-										
5. Self-efficacy	-.05	-.19	-.17	.06	-									
6. Enthusiasm	-.32*	-.41**	.02	.22	.25	-								
7. Growth mindset	-.17	-.06	.10	-.03	.14	.26*	-							
8. Empathy	-.20	-.35**	.06	.28*	.34**	.65***	.33**	-						
9. Inappropriateness of behavior (Darius)	.20	.08	.00	-.11	.02	-.09	.02	-.05	-					
10. Likelihood of reoccurrence (Darius)	.06	-.05	.03	-.19	-.10	-.27	-.11	-.28	.13	-				
11. Severity of punishment (Darius)	.22	.16	-.18	-.27	-.14	-.31	.00	-.08	.16	.10	-			
12. Inappropriateness of behavior (Cody)	.09	.35	.01	-.05	-.41*	-.08	-.04	-.04	-	-	-	-		
13. Likelihood of reoccurrence (Cody)	.09	-.04	-.06	.06	-.07	.09	.12	.32	-	-	-	.25	-	
14. Severity of punishment (Cody)	.18	.23	.00	-.02	-.11	-.02	-.01	-.24	-	-	-	.22	-.01	-
N	65	65	64	65	64	64	66	66	66	34	34	32	32	32
M	4.16	1.61	4.47	4.71	4.18	4.57	4.30	4.24	3.35	4.12	2.35	3.28	4.38	2.44
SD	.73	.82	.77	.60	.73	.68	.53	.38	.77	1.12	.69	.58	.79	.76
Range	2.4-5.8	1-4	1-5	1-5	1.5-5	2-5	2.5-5	3-5	2-5	1-6	2-4	2-4	2-6	2-4

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 6. Summary of Linear Regression Analyses for Race Essentialism Predicting Inappropriateness of Misbehavior, Likelihood of Reoccurrence, and Punishment Severity for Study II

Predictor	Inappropriateness					Stability					Punishment				
	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p
Model 1	.01			.12	.95	.13			1.47	.24	.01			.10	.96
Social Desirability			.09		.65			-.22		.25			.05		.83
Empathy			-.04		.86			-.21		.25			-.10		.60
Growth Mindset			-.04		.86			-.21		.26			.04		.84
Model 2	.05	.04		.37	.83	.16	.00		1.10	.38	.06	.05		.44	.78
Social Desirability			.07		.74			-.23		.25			.02		.93
Empathy			-.02		.90			-.21		.27			-.09		.66
Growth Mindset			-.02		.92			-.21		.28			.06		.77
Race Essentialism			.20		.30			.06		.74			.23		.24

* $p < .05$. ** $p < .01$. *** $p < .001$

Study III

To further explore these relationships and the potential role of race essentialism in discipline practices in real-world teaching contexts, inservice teachers were recruited as participants in Study III.

Questions and Hypotheses

Question #1 Will higher race essentialism be associated with a) more prejudiced beliefs about minoritized students, b) more egalitarian teaching beliefs, c) decreased self-efficacy d) less enthusiasm for teaching minoritized students, and e) lower multicultural teaching beliefs among teachers? *Hypothesis:* Race essentialism will be positively correlated with prejudiced and egalitarian beliefs, while being negatively correlated self-efficacy and enthusiasm for working with minoritized students, and multicultural teaching beliefs.

Question #2 Are a) growth mindset and b) empathy negatively associated with race essentialism in a sample of inservice teachers? *Hypothesis:* Higher race essentialism will be negatively correlated with growth mindset and empathy.

Question #3 Will higher race essentialism be associated with increased perceived likelihood of reoccurrence of misbehavior among participants on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be associated with increased perceived likelihood of reoccurrence of misbehavior in among participants in an implied Black student condition.

Question #4 Will higher race essentialism be associated with increased perceived inappropriateness of misbehavior among participants on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism be associated with increased perceived severity of misbehavior among participants in an implied Black student condition.

Question #5 Will higher race essentialism be associated with harsher punishment of misbehavior among participants on a vignette in which a student is implied to be Black vs implied to be White? *Hypothesis:* Higher race essentialism will be positively associated with punishment severity of misbehavior among participants in an implied Black student condition.

Question #6 Is race essentialism uniquely predictive of a) perceived likelihood of reoccurrence of misbehavior, b) perceived inappropriateness of misbehavior, and c) punishment severity after accounting for growth mindset, empathy, and social desirability? *Hypothesis:* Race essentialism will be a unique predictor of behavior stability, perceived inappropriateness of misbehavior, and punishment severity.

Methods

Approval from Marquette University's Institutional Review Board was received prior to initiating the project.

Participants. Participants included 31 teachers in the Greater Milwaukee area. Participants were majority White, 94% and female, 80%. There was a range of 3-38 completed years in teaching among participants, $M = 18.6$, $SD = 10.6$.

Table 7. *Demographic Variables for Study III*

Sex, <i>n</i> (%)	
Female	24 (80.0%)
Male	6 (20%)
Intersex	0 (0%)
Prefer not to answer	0 (0%)
Race ^a , <i>n</i> (%)	
Black or African American	0 (0%)
Latino/Hispanic	1 (3.2%)
White	29 (93.6%)
Asian	1 (3.2%)
Middle Eastern	0 (0%)
American Indian, First Nation, Indigenous, Alaskan Native	0 (0%)
Native Hawaiian or Other Pacific Islander	0 (0%)

Note. *n* = 31.

^a Participants selected each race that applied.

Procedure. Teachers were recruited from schools in the Greater Milwaukee area. Participants understood that participation was voluntary and had no impact on their job. Participants followed the same procedure from Study I and Study II. Teachers were compensated with a \$10 e-gift card.

Measures. The presentation of the following measures (see Appendix C) was counterbalanced.

Race essentialism. Race essentialism beliefs were assessed using the Race Conceptions Scale (RCS; Williams & Eberhardt, 2008). See Study I for description. Internal consistency was acceptable, $\alpha = .76$.

Growth mindset. Four questions (Gehlbach, 2015) assessed participants' perceptions on the likelihood of teaching and teacher-student relationships improving over time. See Study II for description. Internal consistency was acceptable, $\alpha = .77$.

Empathy. Participants responded to the Toronto Empathy Questionnaire (TEQ; Spreng et al., 2009), which is a self-report measure of empathy. See Study I for description. Internal consistency was acceptable, $\alpha = .85$.

Teacher Cultural Beliefs. The Teacher Cultural Beliefs Scale (TCBS; Hachfeld et al., 2011) was used to assess participants' endorsement of multicultural and egalitarian, or colorblind, beliefs in teaching. See Study II for description. Internal consistency was acceptable for both the Multicultural and Egalitarian scales, $\alpha = .75$ and $\alpha = .70$, respectively.

Prejudice beliefs. Five items assessed participants' agreement with prejudiced beliefs about minoritized students' motivation to engage in school. See Study II for description. Internal consistency was acceptable, $\alpha = .96$.

Self-efficacy. Self-efficacy for teaching diverse students was assessed using a 4-item scale adapted from Hachfeld et al. (2015). See Study II for description. Internal consistency was acceptable, $\alpha = .80$.

Enthusiasm. Enthusiasm for teaching diverse students was assessed using two items adapted from Hachfeld et al. (2015). See Study II for description. Internal consistency was acceptable, $\alpha = .96$.

Social Desirability. Social desirability was assessed using Marlowe-Crowne Social Desirability Scale-Short version (MCSDS; Crowne & Marlowe, 1964; Reynolds, 1982). See Study I for description. Internal consistency was acceptable, $\alpha = .76$.

Results

After completing descriptive analyses, correlational analyses were conducted to answer the first two research questions regarding the associations among race essentialism and each of the variables of interest, (i.e., prejudiced beliefs, multicultural and egalitarian beliefs about teaching, self-efficacy and enthusiasm for working with minoritized students, growth mindset, and empathy). Further correlational analyses were conducted to answer the last three research questions regarding whether race essentialism was associated with perceived behavior stability and severity, and harshness of the punishment, (see Table 8). Hierarchical linear regressions were conducted to investigate the exploratory question of whether race essentialism was uniquely predictive of behavior stability and severity and punishment severity, (see Table 9).

Correlational analyses were conducted to test the research hypotheses in Study III regarding the association between race essentialism and prejudiced beliefs, multicultural and egalitarian beliefs about teaching, self-efficacy and enthusiasm for working with minoritized students, growth mindset, and empathy. As shown in Table 8, participants who endorsed more essentialist beliefs reported greater endorsement of prejudiced beliefs about minoritized youth, $r = .53, p = .00$). Additionally, race essentialism was inversely associated with endorsement of self-efficacy for teaching minoritized youth, $r = -.46, p = .01$. Race essentialism was not correlated with empathy, though the correlation between race essentialism and growth mindset approached statistical significance, $r = -.31, p = .10$.

There also was no relationship between race essentialism and behavior stability, severity, or punishment severity among those participants in the implied Black student condition. The linear regression model (see Table 9) accounting for empathy, growth mindset, and social desirability did not show race essentialism as a unique predictor for participants perceived severity, stability, or punishment of student behavior in the implied Black condition.

Overall, in the sample of teachers, race essentialism demonstrated several significant associations with teaching-specific racial attitudes constructs such as prejudiced beliefs about minoritized students' motivations and perceived self-efficacy for teaching diverse youth. Growth mindset was not statistically significant but was trending in the expected direction.

Table 8. Descriptive Statistics and Correlations among Study III Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Race essentialism	-													
2. Prejudiced beliefs	.53**	-												
3. Egalitarian teaching beliefs	-.16	-.08	-											
4. Multicultural teaching beliefs	-.20	-.15	.46*	-										
5. Self-efficacy	-.46*	-.19	-.01	.10	-									
6. Enthusiasm	-.24	-.51**	.35	.47**	.18	-								
7. Growth mindset	-.31	-.01	.16	.17	.30	.32	-							
8. Empathy	-.28	-.10	.19	.27	.28	.31	.35	-						
9. Inappropriateness of behavior (Darius)	-.23	-.24	.62*	.47	.20	.55*	.18	.45	-					
10. Likelihood of reoccurrence (Darius)	-.34	-.20	-.17	.38	.35	.39	.18	.20	-.17	-				
11. Severity of punishment (Darius)	-.33	-.21	.32	.19	.18	.17	-.05	-.10	.33	.04	-			
12. Inappropriateness of behavior (Cody)	-.08	.22	-.12	.09	-.50	-	-.24	.33	-	-	-	-		
13. Likelihood of reoccurrence (Cody)	-.21	.04	.14	.52*	-.43	-	-.21	.26	-	-	-	.60	-	
14. Severity of punishment (Cody)	-.14	.13	-.25	-.13	-.02	-	.17	-.11	-	-	-	.05	.16	-
N	30	30	30	30	30	30	31	31	15	15	15	16	16	16
M	3.36	1.49	4.45	4.69	3.88	4.82	4.23	4.24	3.00	3.87	3.07	2.75	4.31	2.63
SD	.67	.74	.50	.40	.61	.46	.54	.37	.85	.99	.26	.86	.95	.81
Range	1.4-4.6	1.3-3	3-5	3.3-5	2.3-5	3-5	3-5	3.5-4.9	1-4	2-6	3-4	1-4	2-6	1-3

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 9. Summary of Linear Regression Analyses for Race Essentialism Predicting Inappropriateness of Misbehavior, Likelihood of Reoccurrence, and Punishment Severity for Study III

Predictor	Inappropriateness					Stability					Punishment				
	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p
Model 1	.25			1.23	.35	.15			.65	.60	.03			.12	.95
Social Desirability			-.23		.41			.32		.29			.15		.64
Empathy			.44		.15			.16		.62			-.09		.78
Growth Mindset			-.04		.90			.18		.56			.01		.98
Model 2	.27	.02		.94	.48	.20	.05		.62	.66	.18	.15		.56	.70
Social Desirability			-.26		.38			.28		.37			.07		.81
Empathy			.41		.19			.11		.72			-.17		.61
Growth Mindset			-.10		.77			.09		.79			-.15		.67
Race Essentialism			-.17		.59			-.25		.45			-.44		.21

* $p < .05$. ** $p < .01$. *** $p < .001$

Study IV

Study IV focused on the malleability of race essentialism among preservice teachers. Priming individuals to believe race is biological, distinct, and meaningful has been associated with increased prejudice and anti-Black attitudes (Mandalaywala et al., 2017). As discussed above, one of the potential benefits of understanding how an individual conceptualizes race is the ability to shift conceptualization to one associated with more positive outcomes (No et al., 2008). This may be especially impactful among those still completing their education.

Questions and Hypotheses

Question #1 Will participants exposed to the “race as biological” priming condition and those exposed to the “race as socially constructed” priming condition differ in their endorsement of race essentialism? *Hypothesis:* Race essentialism will be higher in those in the “race as biological” condition.

Question #2 Will there be meaningful statistical differences in a) multicultural teaching beliefs, b) egalitarian teaching beliefs, c) prejudiced beliefs about minoritized students, d) self-efficacy, and e) enthusiasm for teaching minoritized students between participants exposed to the “race as biological” priming condition and those exposed to the “race as socially constructed” priming condition? *Hypothesis:* There will be statistically significant differences between groups for all the constructs. Egalitarian and prejudiced beliefs will be higher in those in the “race as biological” condition, while

multicultural, self-efficacy, and enthusiasm for teaching beliefs will be lower in the “race as biological” condition.

Question #3 Will higher race essentialism be associated with a) more endorsed prejudiced beliefs about minoritized students, b) more egalitarian teaching beliefs, c) decreased self-efficacy, d) less enthusiasm for teaching minoritized students, and e) less multicultural teaching beliefs? *Hypothesis:* Race essentialism will be positively correlated with prejudiced and egalitarian beliefs and negatively correlated with self-efficacy and enthusiasm for working with minoritized students, and multicultural teaching beliefs.

Question #4 Are a) growth mindset and b) empathy negatively associated with race essentialism in a sample of preservice teachers? *Hypothesis:* Higher race essentialism will be negatively correlated with growth mindset and empathy.

Question #5 Will higher race essentialism be associated with increased perceived likelihood of reoccurrence of misbehavior among participants in an implied Black student condition? *Hypothesis:* Higher race essentialism will be associated with increased perceived likelihood of reoccurrence of misbehavior in among participants in an implied Black student condition.

Question #6 Will higher race essentialism be associated with increased perceived inappropriateness of misbehavior among participants in an implied Black student condition? *Hypothesis:* Higher race essentialism will be associated with increased perceived severity of misbehavior among participants in an implied Black student condition.

Question #7 Will higher race essentialism be associated with more severe punishment of misbehavior among participants in an implied Black student condition?

Hypothesis: Higher race essentialism will be positively associated with punishment severity of misbehavior among participants in an implied Black student condition.

Question #8 Is race essentialism uniquely predictive of a) perceived likelihood of reoccurrence of misbehavior, b) perceived inappropriateness of misbehavior, and c) punishment severity beyond growth mindset, empathy, and social desirability?

Hypothesis: Race essentialism will be a unique predictor of behavior stability, perceived inappropriateness of misbehavior, and punishment severity.

Methods

Approval from Marquette University's Institutional Review Board was received prior to initiating the project.

Participants. The participants in Study IV included 66 undergraduate and masters students in education. There was a range of 0-15 completed semesters in field placements among participants, $M = 1.98$, $SD = 2.18$.

Table 10. Demographic Variables for Study IV

Sex, n (%)	
Female	51 (78.5%)
Male	12 (18.5%)
Intersex	0 (0%)
Prefer not to answer	2 (3%)
Race^a, n (%)	
Black or African American	4 (6.1%)
Latino/Hispanic	5 (7.6%)
White	54 (81%)
Asian	1 (1.5%)

Middle Eastern	1 (1.5%)
American Indian, First Nation, Indigenous, Alaskan Native	0 (0%)
Native Hawaiian or Other Pacific Islander	0 (0%)
Year in college, <i>n</i> (%)	
1 st	0 (0%)
2 nd	39 (19.3%)
3 rd	20 (10.9%)
4 th	2 (9.1%)
Graduate Student	4 (6.2%)

Note. *n* = 66.

^a Participants selected each race that applied.

Procedure. Participants were recruited from Marquette University and Gonzaga University via the education department at each institution. Participants were randomly assigned to a condition and read one of two vignettes designed to prime either an essentialist perspective on race or a social constructionist perspective (No et al., 2008). Following the vignette, participants were asked to briefly describe the main theme of the scientific article excerpt. See Appendix D for the vignettes. Participants then followed the same procedure from Studies I, II, and III. Participants were entered into a raffle for ten \$25 Amazon e-gift cards.

Measures. The presentation of the following measures (see Appendix D) was counterbalanced.

Race essentialism. Race essentialism beliefs were assessed using the Race Conceptions Scale (RCS; Williams & Eberhardt, 2008). See Study I for a description of the measure. Internal consistency was acceptable, $\alpha = .81$.

Growth mindset. Four questions (Gehlbach, 2015) assessed participants' perceptions on the likelihood of teaching and teacher-student relationships improving

over time. See Study II for a description of the measure. Internal consistency was acceptable, $\alpha = .84$.

Empathy. Participants responded to the Toronto Empathy Questionnaire (TEQ; Spreng et al., 2009), which is a self-report measure of empathy. See Study I for a description of the measure. Internal consistency was acceptable, $\alpha = .90$.

Teacher Cultural Beliefs. The Teacher Cultural Beliefs Scale (TCBS; Hachfeld et al., 2011) was used to assess participants' endorsement of multicultural and egalitarian, or colorblind, beliefs in teaching. See Study II for a description of the measure. Internal consistency was acceptable for both the Multicultural and Egalitarian scales, $\alpha = .84$ and $\alpha = .80$, respectively.

Prejudice beliefs. Five items assessed participants' agreement with prejudiced beliefs about minoritized students' motivation to engage in school. See Study II for a description of the measure. Internal consistency was acceptable, $\alpha = .83$.

Self-efficacy. Self-efficacy for teaching diverse students was assessed using a 4-item scale adapted from Hachfeld et al. (2015). See Study II for a description of the measure. Internal consistency was acceptable, $\alpha = .75$.

Enthusiasm. Enthusiasm for teaching diverse students was assessed using two items adapted from Hachfeld et al. (2015). See Study II for a description of the measure. Internal consistency was acceptable, $\alpha = .97$.

Social Desirability. Social desirability was assessed using Marlowe-Crowne Social Desirability Scale-Short version (MCSDS; Crowne & Marlowe, 1964; Reynolds, 1982). See Study I for a description of the measure. Internal consistency was acceptable, $\alpha = .73$.

Results

After descriptive analyses (see Table 11), an independent samples t-test was conducted to answer the first research question. There was no statistically significant difference of race essentialism between the two priming conditions, race as biological, $M = 3.71$, $SD = .75$, and race as socially constructed, $M = 3.92$, $SD = .67$. Additionally, a MANOVA (see Table 12) showed there were no statistically significant differences between groups on prejudiced beliefs, multicultural and egalitarian beliefs about teaching, self-efficacy, or enthusiasm for working with minoritized students.

Correlational analyses also were conducted to test the hypotheses in Study IV regarding the association between race essentialism and prejudiced beliefs, multicultural and egalitarian beliefs about teaching, self-efficacy and enthusiasm for working with minoritized students, growth mindset, and empathy. As shown in Table 11, participants who endorsed more essentialist beliefs reported more endorsement of prejudiced beliefs about minoritized youth, $r = .31$, $p = .01$. Additionally, race essentialism was inversely associated with endorsement of multicultural approaches to teaching minoritized youth, $r = -.29$, $p = .02$. Further, there was a negative correlation between race essentialism and empathy in this sample, such that more endorsement of race essentialism was associated with less empathic beliefs and practices, $r = -.27$, $p = .03$. There was not a statistically significant correlation between race essentialism and growth mindset. Race essentialism was significantly positively correlated with perceived severity of the misbehavior in the condition with the implied Black student, as those higher on race essentialism perceived *Darius'* behavior as more inappropriate, $r = .37$, p

= .03. There was no statistically significant relationship between race essentialism and behavior stability or punishment severity among those participants in the implied Black student condition.

The linear regression model (see Table 13) accounting for empathy, growth mindset, and social desirability did not show race essentialism as a unique predictor for participants perceived severity, stability, or punishment of student behavior in the implied Black condition.

While the prime did not appear to produce a difference between the two groups' race essentialist beliefs, strong relations among race essentialism and related constructs emerged. Among preservice teachers, race essentialism was significantly correlated with constructs related to beliefs and racial attitudes in the context of teaching, such as prejudiced beliefs about minoritized students, multicultural teaching practices, and empathy. Findings also suggested that race essentialism was related to perceived inappropriateness of student misbehavior among those participants in the implied Black student condition.

Table 11. Descriptive Statistics and Correlations among Study IV Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Race essentialism	-													
2. Prejudiced beliefs	.31*	-												
3. Egalitarian teaching beliefs	-.22	-.15	-											
4. Multicultural teaching beliefs	-.29*	-.49**	.53*	-										
5. Self-efficacy	-.15	-.43**	.19	.39**	-									
6. Enthusiasm	-.14	-.39**	.14	.40**	.57**	-								
7. Growth mindset	-.10	-.31*	.23	.31*	.47**	.34	-							
8. Empathy	-.27*	-.36**	.38**	.64**	.41**	.28	.20	-						
9. Inappropriateness of behavior (Darius)	.37*	.25	-.15	-.27	-.27	-.01	-.27	-.32	-					
10. Likelihood of reoccurrence (Darius)	.31	.38*	.13	-.34*	-.11	-.26	-.03	-.28	.34*	-				
11. Severity of punishment (Darius)	.10	.24	-.04	-.09	-.26	.10	-.39	-.03	.31	.08	-			
12. Inappropriateness of behavior (Cody)	.26	.08	-.06	-.07	.07	.09	-.10	-.05	-	-	-	-		
13. Likelihood of reoccurrence (Cody)	.01	-.22	.22	.20	-.17	-.07	-.21	.25	-	-	-	.37*	-	
14. Severity of punishment (Cody)	-.04	.19	-.07	-.20	-.02	.02	.04	-.10	-	-	-	-.06	-.27	-
N	66	65	65	65	65	65	65	65	35	35	35	31	31	31
M	3.82	1.40	4.45	4.67	4.25	4.75	4.35	4.23	3.46	4.20	3.11	3.35	4.23	2.84
SD	.71	.65	.61	.56	.61	.61	.65	.52	.74	.79	.53	.80	.85	.86
Range	1.7-5.5	1-3.4	3-5	2.5-5	2.8-5	2-5	2-5	2.4-4.9	1-5	2-6	1-4	1-4	2-6	1-4

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 12. MANOVA Examining Group Differences Between Conditions for Study IV

Measure	Biological		Constructionist		F(1, 63)	η^2
	M	SD	M	SD		
Race essentialism	3.71	.76	3.93	.67	1.50	.02
Prejudiced beliefs	1.26	.51	1.54	.75	3.02	.05
Egalitarian teaching beliefs	4.41	.61	4.48	.62	.24	.00
Multicultural teaching beliefs	4.73	.41	4.61	.69	.66	.01
Self-efficacy	4.35	.55	4.15	.66	1.77	.03
Enthusiasm	4.83	.41	4.75	.76	1.39	.02

* $p < .05$. ** $p < .01$. *** $p < .001$

Table 13. Summary of Linear Regression Analyses for Race Essentialism Predicting Inappropriateness of Misbehavior, Likelihood of Reoccurrence, and Punishment Severity for Study IV

Predictor	Inappropriateness					Stability					Punishment				
	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p	R ²	ΔR ²	β	F	p
Model 1	.14			1.73	.18	.15			1.87	.16	.16			2.00	.14
Social Desirability			-.09		.60			.28		.12			.05		.77
Empathy			-.23		.22			-.40*		.04			.09		.63
Growth Mindset			-.18		.31			.07		.70			-.42*		.02
Model 2	.24	.10		2.35	.07	.21	.06		2.01	.12	.17	.01		1.55	.21
Social Desirability			-.10		.55			.27		.13			.05		.79
Empathy			-.16		.39			-.34		.08			.11		.56
Growth Mindset			-.19		.28			.07		.71			-.42*		.02
Race Essentialism			.32		.06			.25		.15			.10		.57

* $p < .05$. ** $p < .01$. *** $p < .001$

General Discussion

The purpose of the current project was to explore the potential role of race essentialism in the school context across several studies. In Study I, the immediate aim was to further validate the commonly-used race essentialism measure, the RCS (Williams & Eberhardt, 2008) following the poor internal consistency achieved when using the 10-item short version previously validated by Young and colleagues (2013). Studies II and III aimed to explore the main topic of interest in the current project: whether race essentialism was related to perceived discipline and equitable teaching practices for White educators working with minoritized students using a hypothetical vignette describing student misbehavior. The relationship between race essentialism and several teaching- and equity- related constructs was also explored. Finally, Study IV aimed to expand on literature that suggests that race essentialism can be manipulated during brief exposures to constructionist perspectives (Donovan, 2017; No et al., 2008; Tadmor et al., 2013; Tawa, 2016; 2020).

The results of Studies I, III, and IV provide evidence that race essentialism is related to educators' perceptions of minoritized students' misbehavior and their beliefs about these students more broadly. The majority of participants across all four studies were White (73%) and female (78%) undergraduate students (including preservice teachers) and teachers. The sample was consistent with national reports of teacher demographic characteristics, with teachers from minoritized backgrounds making up approximately 20% of the workforce (Green, 2015).

Since the summer of 2020, there has been a shift in race relations across the United States, especially among young, liberal White people who have moved to both acknowledge systemic racism while distancing themselves from being active participants in racism (Bonilla-Silva, 2021). These shifts may have impacted the poor internal consistency of the short version of the RCS (Young et al., 2013) in the preservice teacher sample of Study II. This may have been due in part to the heightened sensitivity of discussions around race. For example, participants may have been more likely to agree with items such as “The political climate can dictate whether someone is categorized as Black or White” than they would have in the past. While beliefs such as “Siblings born to the same parents will always be of the same race as each other” may not have been as impacted by societal shifts and racial tension. This inconsistent response pattern may have contributed to the poor internal consistency of the short-form scale. Given these potential shifts, it was important to assess how conceptualizations of race related to previously correlated constructs and teaching-related constructs, more specifically.

Convergent Validity and Teacher-Specific Constructs

Racial attitudes. Supportive of previous findings in Pauker and colleagues’ (2018) study, there were statistically significant correlations between a total score calculated from the full 22-item measure of race essentialism and beliefs in a social hierarchy and modern racism. Race essentialism also was strongly linked to colorblind ideology. These relationships were expected given the strong associations among modern racism, social dominance orientation, and colorblindness in prior research (Mekawi et al., 2020; Neville et al., 2013), and among modern racism, social dominance orientation, and race

essentialism in the present sample. Though the results supported the hypothesis, the findings were interesting given the more literal elements of each construct being at odds. Race essentialism beliefs emphasize the inherent differences between racial groups, while colorblind ideology serves to minimize these differences (William & Eberhardt, 2008; Neville et al., 2013). The finding may suggest that while individuals are willing to acknowledge different races exist and their physical distinctness, they are less willing to acknowledge that these differences have real sociopolitical implications (Neville, 2000).

Prejudiced beliefs. Across the three studies, race essentialism was found to be associated with motivations to act in nonprejudiced ways and prejudiced beliefs about working with minoritized students. In the general sample of undergraduate students included in Study I, internal motivation to act in nonprejudiced ways was inversely associated with endorsement of race essentialism, while higher levels of external motivations tended to associated with higher endorsement of race essentialism. The internal motivation to respond without prejudice suggests that people with strong, internalized beliefs about anti-prejudice attitudes tend to have more pro-Black, anti-racism attitudes as well (Plant & Devine, 1998). The present study found that those who were more internally motivated to respond without prejudice reported less modern racism, social hierarchy, and race essentialism beliefs. Also consistent with prior studies on prejudiced beliefs and race essentialism (Jayaratne et al., 2006; Mandalaywala et al., 2018; Williams & Eberhardt, 2008), both inservice and preservice teachers tended to endorse more negative beliefs about minoritized students when they had more

essentialist beliefs about race. Findings supported the general hypotheses in three of the four studies, such that race essentialism was positively associated with prejudiced beliefs and external motivations to appear nonprejudiced and negatively associated with internal motivations. Individuals who endorsed race essentialist beliefs tended to endorse more prejudiced beliefs and center concern about being perceived negatively by others in their reasons for not demonstrating racism, rather than centering an intrinsic or core belief that being prejudiced is “wrong.” The implications of these beliefs may be driving the reported differential treatment of minoritized youth in schools reviewed earlier. Teachers who hold these beliefs likely engage in behaviors that undermine the teacher-student relationship, such as being overly critical of minoritized students and holding them to a lower standard than their White students (Cherng, 2016; Tenebaum & Ruck, 2007).

Empathy and growth mindset. Among preservice teachers, race essentialism was correlated with empathy, but this association was not statistically significant among the general sample of undergraduate students in Study I. As hypothesized, endorsement of more race essentialist beliefs was associated with lower empathy. Though empathy and race essentialism had not been directly examined together prior to the present project, empathy has been found to be key in both education (Okonofua et al., 2016; Salanga & Bernardo, 2017; Suldo et al., 2009) and intergroup relations (DeSante & Smith, 2020; Nicol & Rounding, 2013; Roswell et al., 2020). A lack of empathy hinders the ability to identify with the perspectives of others (Mekawi et al., 2020). Research has shown that lower empathy is related to less feelings of guilt regarding racial inequities,

which can translate into teachers' classroom practices (Tettegah, 2016). For example, teachers coached to increase empathic responses to student misbehavior saw improvements in student-reported relationship quality and decreases in suspension rates (Okonofua et al., 2016).

Similarly, growth mindset was hypothesized to be related to race essentialism given prior research highlighting the role of essentialist beliefs in stifling creativity and inducing a fixed mindset (Tadmor et al., 2013). However, in the present samples and context, race essentialism and growth mindset were not correlated, though among the sample of teachers in Study III, the moderately strong correlation was approaching statistical significance. The correlation not reaching statistical significance may have been due to sample size, the brevity of the growth mindset measure, or that growth mindset was measured using a teacher-specific measure of the construct. Prior studies that explored race essentialism with fixed mindset and cognitive flexibility (Pauker et al., 2018; Tadmor et al., 2013) used -performance-based measurements of these constructs, such as the RAT (Mednick, 1962) or category exemplars (Isen & Daubman, 1984). However, growth mindset was negatively associated with prejudice beliefs about minoritized students among preservice teachers, which supports the notion that growth mindset is important in intergroup relations.

Teaching approaches and attitudes. In regard to other educator-specific associations, race essentialism was inversely related to multicultural teaching practices among preservice teachers (Study IV), such that those higher on race essentialism endorsed less belief in multiculturalism in the classroom. Hachfeld and colleagues

(2011) suggested that teachers' beliefs about and approach to cultural diversity in the classroom indicated their willingness and ability to teach students with dissimilar backgrounds from themselves. Among the current sample of teachers, findings suggested that those higher on race essentialism may be less willing or able to support minoritized students in the classroom (Study III). These findings are in the same vein of prior research which found that teachers endorsing less multiculturalism beliefs also endorsed less enthusiasm and more prejudiced beliefs about working with minoritized students. These findings were replicated in the current sample as well (Hachfeld et al., 2015). Findings demonstrate that endorsing more essentialist and less multiculturalism beliefs could severely hinder the quality of teacher-student relationships between White teachers and their minoritized students. Preservice and inservice teachers who feel less capable of working effectively with minoritized students may perceive these students' behaviors and capacity for learning differently than they perceive their White students.

Discipline Practices

Across multiple studies, the aim was to identify beliefs and practices that may contribute to inequitable discipline practices among preservice and inservice teachers. It was important to examine children's ambiguous misbehaviors that are typically left up to the teacher's discretion to choose how to respond or react (Smolkowski et al., 2016). In two of the four studies, among a general sample of undergraduate students (Study I) and preservice teachers (Study IV), race essentialism was associated with the perceived severity of behavior inappropriateness within the implied Black student condition. This

was in line with previous research demonstrating the relationship between beliefs about race and discipline (Riddle & Sinclair, 2019). However, this relationship between race essentialism and behavior severity did not exist in the implied White student condition, highlighting that essentialist conceptualizations about race may have more negative outcomes for minoritized youth.

The main hypotheses regarding discipline practices were not supported in the current project. Among the participants in the condition with the implied Black student, Darius, there was no association between race essentialism and punishment severity or behavior stability. The proposed notion that race essentialism, the belief in a biological essence that is stable across time and contexts, would be related to perceiving a Black child's misbehavior as innate and immutable was not evident in the current data. This may have been in part due to the brevity in which punishment severity and behavior stability were assessed. For example, there was very little variance in the punishment severity item, with most participants selecting the milder punishment. With a larger sample and more items to assess discipline beliefs, there may be evidence of a relationship. Similarly, it is possible that measuring behavior stability would be better assessed using more than one item. However, Okonofua and Eberhardt's (2015) findings demonstrated the utility of assessing stability with one item as they found that experienced, inservice teachers were more likely to label a Black student as a "troublemaker" following misbehavior.

Race Essentialism Malleability

Findings were not supportive of the hypothesis that conceptions about race could be manipulated following a brief exposure. There was no significant difference in preservice teachers' race essentialist beliefs between the two conditions (i.e., essentialist and constructionist). There were no between-group differences between conditions on any constructs. This was at odds with previous findings using similar approaches to manipulating conceptions of race which did find differences (Mandalaywala et al., 2017; No et al., 2008; Tadmor et al., 2013). One potential explanation for the ineffective prime may have been the follow-up item that was intended to briefly assess participants comprehension of the vignette. It is possible that in having participants think through whether they understood the article excerpt, they further solidified their own previously-held beliefs. Moreover, the present study did not include a pretest assessment of race essentialist beliefs to ascertain whether beliefs were shifted at all. However, given the brevity of the exposure to the potentially new information about race conceptions, a pre-test may not have offered much additional insight. Studies that have employed a pre-/post- test design in measuring race essentialism have done so across an extended period of time, with longer exposures (Donovan, 2019; Pauker et al., 2018).

Limitations

The current project did have several notable limitations. First, the sample sizes of studies II-IV were small. G*Power analyses suggested that to have adequate power to

detect differences between groups in Study IV, there should have been approximately 64 participants in each condition for $\beta = .80$, whereas the current total sample was $N = 66$. This was in part due to the challenges of collecting data throughout the COVID-19 pandemic. Recruitment and data collection were particularly difficult for studies II-IV, as teachers and education majors were more difficult to sample. Inservice and preservice teachers in the field were generally overwhelmed and experiencing significant burnout due to the additional stressors and tasks associated with educating in-person and virtually throughout the pandemic (Robusa et al., 2021). Educators have, understandably, been focused primarily on adjusting to the new requirements of their careers and training (Berry et al., 2020). In such, participation in extracurricular tasks, such as voluntary surveys, likely were not a priority. With Study I, recruitment was done through a pool of undergraduate students who received course credit for participation. Preservice teachers attending Marquette University also were able to receive course credit for completing Study IV. However, in Studies II-IV participants were recruited via professional and personal relationships. Grant funding was received in order to recruit and compensate participants from outside Marquette. E-mails were sent to department chairs and colleagues at several local colleges and other Jesuit universities to solicit participants. Prior research partners in local school districts were contacted to recruit teacher participants. The data collection continued through fall 2021, which helped secure 11 additional inservice teachers and 46 additional preservice teachers. Unfortunately, the total number of participants was smaller than anticipated.

Implications for Research

Race essentialism was related to a number of teaching-related constructs, particularly prejudiced beliefs and self-efficacy in teaching minoritized students, engaging in multicultural teaching practices, and empathy. Notably, race essentialism also was associated with perceptions of minoritized students' misbehavior. While establishing these associations was only a first step, it does suggest an encouraging direction for future research to further investigate these relationships. Moving forward, this study should be replicated with a larger sample size of preservice and inservice teachers. Analyses were limited by the difficulties during data collection with this sample, but seeking out preservice and inservice teachers via broader recruitment, e.g., Amazon Mechanical Turk survey, may aid in scaling up the project.

Further, it may be beneficial to expand on how certain constructs were assessed. For example, race essentialism in the present studies was measured using a more bio-somatic essentialism measure that focused on a biological essence for phenotype (Andreychik & Gill, 2014; Williams & Eberhardt, 2008). Specifically, the items primarily assessed whether participants believed race was biologically observable. In follow-up studies, perhaps multiple measures of race essentialism can be included to also understand the role of more bio-behavioral essentialism, or biological essence of behavior and thinking, more explicitly. Measures that include both are much less widely used but have distinguished more negative outcomes, such as prejudiced beliefs, associated with bio-behavioral essentialism (Andreychik & Gill, 2014). There did appear to be a consistent relationship between the bio-somatic RCS (Williams & Eberhardt,

2008) measure of race essentialism and perceived inappropriateness of the implied Black student's misbehavior in the current project, and this may be due to the immediate assessment of whether the behavior is perceived in a negative light. While the perceived inappropriateness may be more closely related to the perceiving Darius as Black, a bio-behavioral essentialism measure may have had stronger correlations with the other discipline variables, such as behavioral stability over time. Thus, these associations are worth exploring.

It also may be important to more explicitly understand associations between race essentialism and the "real-world" variables of interest such as teachers' actual discipline practices. Prior research has examined the impact of inequitable discipline practices on the school experiences of minoritized youth (Pena-Shaffa et al., 2019; Perry & Morris, 2014). Given the present findings, exploring how these beliefs translate to teaching practices could be promising, such as examining if race essentialism predicts the number and type of discipline referrals that teachers make. Rather than relying on the hypothetical approach to assessing discipline strategies, having objective data to examine these relationships may underscore the necessity of addressing race conceptualizations. Future research also may examine causal links between race essentialism and variables of interest using a longitudinal approach. Being able to study these constructs in real classrooms would offer the possibility of also examining student perspectives and outcomes, such as their perceptions of class/school climate, teacher-student relationship quality, and general well-being.

Implications for Education and Practice

Studying and intervening with preservice teachers affords a unique opportunity to inform long-lasting positive change, as these are individuals who may have a direct impact on minoritized youth for years to come. If preservice teachers develop a more constructionist view of race, they may begin to challenge biases they did not know they held. With a more constructionist lens, individuals recognize that race is context specific and how society defines it changes over time with cultural shifts (i.e., shifts in politics and accessibility to perceived finite resources; Morning, 2011). Preservice teachers educated in this approach to race can alter potentially harmful held beliefs about innate differences in Black and White students (e.g., poorer behavior among Black students). They may begin to understand that the way they view race may negatively influence their interactions and teaching practices with Black students, which may further perpetuate the observed discipline gap. Education programs and curriculums preparing educators offer an opportune environment for providing this novel lens for their students, prior to classroom experience. Professional development for inservice teachers is an additional avenue for introducing a new framework for exploring race conceptions. It will be imperative that inservice teachers are not further overburdened, therefore integrating these principles into existing staff development trainings may make discussions and learning most manageable and impactful.

Overall, evidence supports that understanding race essentialism in the school context, particularly in regard to teachers' discipline practices, may aid in addressing the growing racial discipline gap between minoritized students and their White

counterparts. Positive school-based experiences, such as environments fostering equity and support, have immense benefits for all students, and can promote resilience and wellbeing among minoritized youth. Therefore, it is essential we understand the beliefs that undergird more harmful school environments that perpetuate discipline gaps and inequity, and thus, better inform education practices and potential intervention efforts.

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Appendix A

Please read the following vignette about an interaction between a teacher and student and answer some questions about how you believe you would respond in that situation.

Vignette

You are a seventh-grade math teacher at a middle school. It is the middle of the school year. Darius is a 12-year-old student in your fourth period math class. * You just finished a geometry lesson and have asked all of the students to complete two worksheets independently. As you walk around the room to check on the students' progress, you notice that Darius has his head on his desk. After allowing a few minutes to pass, you walk over to him and say, "Please start your worksheets, Darius." He raises his head, turns to you, and says, "Make me."

*In the second survey version this will read, "Cody is a 12-year-old student in your fourth period math class.

1. How inappropriate was Darius' behavior? (Select one response only)

- a. It was not inappropriate
- b. Slightly inappropriate
- c. Somewhat inappropriate
- d. Very inappropriate
- e. Extremely inappropriate

2. How likely do you think Darius is to engage in this behavior (or a very similar behavior) in the future? (Select one response only)

- a. Extremely unlikely
- b. Very unlikely
- c. Somewhat unlikely
- d. Somewhat likely
- e. Very likely
- f. Extremely likely

In the next part of the study, please answer some general questions about your thoughts, behavior, and beliefs about teaching.

Race Essentialism (7-point Likert scale; *Do not agree to Strongly agree*)

- 1. No one can change his or her race—you are who you are.
- 2. It's natural to notice the racial group to which people belong.
- 3. Siblings born to the same parents will always be of the same race as each other.

4. Young children probably learn about which people fall into which racial groups automatically, without much help from adults.
5. A person's race is fixed at birth.
6. The political climate can dictate whether someone is categorized as Black or White.
7. The average person is highly accurate at identifying people by race.
8. It's easy to tell what race people are by looking at them.
9. Racial groups are primarily determined by biology.
10. It's possible to be a full member of more than one race.

Modern Racism Scale (5-point Likert scale; *Strongly disagree to Strongly agree*)

1. Discrimination against blacks is no longer a problem in the United States.
2. It is easy to understand the anger of black people in America.
3. Blacks have more influence upon school desegregation plans than they ought to have.
4. Blacks are getting too demanding in their push for equal rights.
5. Blacks should not push themselves where they are not wanted.
6. Over the past few years, blacks have gotten more economically than they deserve.
7. Over the past few years, the government and news media have shown more respect to blacks than they deserve.

Internal and External Motivation to Respond without Prejudice (9-point Likert scale; *Strongly disagree to Strongly agree*)

1. Because of today's PC (politically correct) standards I try to appear nonprejudiced toward Black people. .
2. I try to hide any negative thoughts about Black people in order to avoid negative reactions from others.
3. If I acted prejudiced toward Black people, I would be concerned that others would be angry with me.
4. I attempt to appear nonprejudiced toward Black people in order to avoid disapproval from others.
5. I try to act nonprejudiced toward Black people because of pressure from others.
6. I attempt to act in nonprejudiced ways toward Black people because it is personally important to me.
7. According to my personal values, using stereotypes about Black people is OK. (R)
8. I am personally motivated by my beliefs to be nonprejudiced toward Black people.
9. Because of my personal values, I believe that using stereotypes about Black people is wrong.
10. Being nonprejudiced toward Black people is important to my self-concept.

Color-Blind Racial Attitudes Scale (6-point Likert scale; *Strongly disagree to Strongly agree*)

1. Everyone who works hard, no matter what race they are, has an equal chance to become rich.
2. Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.
3. It is important that people begin to think of themselves as American and not African American, Mexican American or Italian American.
4. Due to racial discrimination, programs such as affirmative action are necessary to help create equality.
5. Racism is a major problem in the U.S.
6. Race is very important in determining who is successful and who is not.
7. Racism may have been a problem in the past, but it is not an important problem today.
8. Racial and ethnic minorities do not have the same opportunities as White people in the U.S.
9. White people in the U.S. are discriminated against because of the color their skin.
10. Talking about racial issues causes unnecessary tension.
11. It is important for political leaders to talk about racism to help work through or solve society's problems.
12. White people in the U.S. have certain advantages because of the color of their skin.
13. Immigrants should try to fit into the culture and adopt the values of the U.S.
14. English should be the only official language in the U.S.
15. White people are more to blame for racial discrimination in the U.S. than racial and ethnic minorities.
16. Social policies, such as affirmative action, discriminate unfairly against White people.
17. It is important for public schools to teach about the history and contributions of racial and ethnic minorities.
18. Racial and ethnic minorities in the U.S. have certain advantages because of the color of their skin.
19. Racial problems in the U.S. are rare, isolated situations.
20. Race plays an important role in who gets sent to prison.

Social Dominance Orientation (7-point Likert scale; *Strongly oppose to Strongly favor*)

1. Some groups of people must be kept in their place.
2. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
3. An ideal society requires some groups to be on top and others to be on the bottom.
4. Some groups of people are simply inferior to other groups.
5. Groups at the bottom are just as deserving as groups at the top.
6. No one group should dominate in society.
7. Groups at the bottom should not have to stay in their place.

8. Group dominance is a poor principle.
9. We should not push for group equality.
10. We shouldn't try to guarantee that every group has the same quality of life.
11. It is unjust to try to make groups equal.
12. Group equality should not be our primary goal.
13. We should work to give all groups an equal chance to succeed.
14. We should do what we can to equalize conditions for different groups.
15. No matter how much effort it takes, we ought to strive to ensure that all groups have the same chance in life.
16. Group equality should be our ideal.

Social Desirability

1. It is sometimes hard for me to go on with my work if I am not encouraged.
True
False
2. I sometimes feel resentful when I don't get my own way.
True
False
3. On a few occasions, I have given up doing something because I thought too little of my ability.
True
False
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
True
False
5. No matter who I'm talking to, I'm always a good listener.
True
False
6. There have been occasions when I took advantage of someone.
True
False
7. I'm always willing to admit it when I make a mistake.
True
False
8. I sometimes try to get even, rather than forgive and forget.

True

False

9. I am always courteous, even to people who are disagreeable.

True

False

10. I have never been irked when people expressed ideas very different from my own.

True

False

11. There have been times when I was quite jealous of the good fortune of others.

True

False

12. I am sometimes irritated by people who ask favors of me.

True

False

13. I have never deliberately said something that hurt someone's feelings.

True

False

Empathy (5-point Likert scale; *Never to Always*)

1. When someone else is feeling excited, I tend to get excited too
2. Other people's misfortunes do not disturb me a great deal
3. It upsets me to see someone being treated disrespectfully
4. I remain unaffected when someone close to me is happy
5. I enjoy making other people feel better
6. I have tender, concerned feelings for people less fortunate than me
7. When a friend starts to talk about his/her problems, I try to steer the conversation towards something else
8. I can tell when others are sad even when they do not say anything
9. I find that I am "in tune" with other people's moods
10. I do not feel sympathy for people who cause their own serious illnesses
11. I become irritated when someone cries
12. I am not really interested in how other people feel
13. I get a strong urge to help when I see someone who is upset
14. When I see someone being treated unfairly, I do not feel very much pity for them
15. I find it silly for people to cry out of happiness
16. When I see someone being taken advantage of, I feel kind of protective towards him/her

Please answer the following four demographic questions about yourself.

1. What is your birth sex?

- a. Female
- b. Intersex
- c. Male
- d. Prefer not to answer

2. What best describes your race/ethnicity (select all that apply)?

- a. Alaskan Native
- b. American Indian, First Nation, or Indigenous or
- c. Asian or Asian American
- d. Black or African American
- e. Hispanic, Latino/a/x, or Chicano/a/x
- f. Middle Eastern
- g. Native Hawaiian or Other Pacific Islander
- h. White

3. What best describes your current standing in school?

- a. Freshman
- b. Sophomore
- c. Junior
- d. Senior

4. What is your major? _____

Thank you for completing the survey. In order to receive your credit please click the link below and it will take you to a separate website. This will enable us to keep your responses to the questions above while enabling you to enter your name, email address, and course information to receive your credit.

Appendix B

Please read the following vignette about an interaction between a teacher and student and answer some questions about how you believe you would respond in that situation.

Vignette

You are a seventh-grade math teacher at a middle school. It is the middle of the school year. Darius is a 12-year-old student in your fourth period math class. * You just finished a geometry lesson and have asked all of the students to complete two worksheets independently. As you walk around the room to check on the students' progress, you notice that Darius has his head on his desk. After allowing a few minutes to pass, you walk over to him and say, "Please start your worksheets, Darius." He raises his head, turns to you, and says, "Make me."

*In the second survey version this will read, "Cody is a 12-year-old student in your fourth period math class.

1. Which of the following choices describes how you would most likely respond to this situation? (Select one response only)

- a. Ignore it (e.g., continue walking around the room helping other students)
- b. Use humor to defuse the situation
- c. Tell him that you can't "make him" but you would really like for him to get started
- d. Tell him that he can choose between getting started and going to the office, and then follow through with the consequence of going to the office if he does not start.
- e. Send him to the principal's office immediately

2. How inappropriate was Darius' behavior? (Select one response only)

- a. It was not inappropriate
- b. Slightly inappropriate
- c. Somewhat inappropriate
- d. Very inappropriate
- e. Extremely inappropriate

3. How likely do you think Darius is to engage in this behavior (or a very similar behavior) in the future? (Select one response only)

- a. Extremely unlikely
- b. Very unlikely
- c. Somewhat unlikely
- d. Somewhat likely
- e. Very likely

f. Extremely likely

In the next part of the study, please answer some general questions about your thoughts, behavior, and beliefs about teaching.

Race Essentialism (7-point Likert scale; Do not agree to Strongly agree)

1. No one can change his or her race—you are who you are.
2. It's natural to notice the racial group to which people belong.
3. Siblings born to the same parents will always be of the same race as each other.
4. Young children probably learn about which people fall into which racial groups automatically, without much help from adults.
5. A person's race is fixed at birth.
6. The political climate can dictate whether someone is categorized as Black or White.
7. The average person is highly accurate at identifying people by race.
8. It's easy to tell what race people are by looking at them.
9. Racial groups are primarily determined by biology.
10. It's possible to be a full member of more than one race.

Social Desirability

1. It is sometimes hard for me to go on with my work if I am not encouraged.

True

False

2. I sometimes feel resentful when I don't get my own way.

True

False

3. On a few occasions, I have given up doing something because I thought too little of my ability.

True

False

4. There have been times when I felt like rebelling against people in authority even though I knew they were right.

True

False

5. No matter who I'm talking to, I'm always a good listener.

True

False

6. There have been occasions when I took advantage of someone.

True

False

7. I'm always willing to admit it when I make a mistake.

True

False

8. I sometimes try to get even, rather than forgive and forget.

True

False

9. I am always courteous, even to people who are disagreeable.

True

False

10. I have never been irked when people expressed ideas very different from my own.

True

False

11. There have been times when I was quite jealous of the good fortune of others.

True

False

12. I am sometimes irritated by people who ask favors of me.

True

False

13. I have never deliberately said something that hurt someone's feelings.

True

False

Empathy (5-point Likert scale; *Never to Always*)

1. When someone else is feeling excited, I tend to get excited too
2. Other people's misfortunes do not disturb me a great deal
3. It upsets me to see someone being treated disrespectfully
4. I remain unaffected when someone close to me is happy
5. I enjoy making other people feel better
6. I have tender, concerned feelings for people less fortunate than me
7. When a friend starts to talk about his/her problems, I try to steer the conversation towards something else
8. I can tell when others are sad even when they do not say anything
9. I find that I am "in tune" with other people's moods
10. I do not feel sympathy for people who cause their own serious illnesses
11. I become irritated when someone cries
12. I am not really interested in how other people feel

13. I get a strong urge to help when I see someone who is upset
14. When I see someone being treated unfairly, I do not feel very much pity for them
15. I find it silly for people to cry out of happiness
16. When I see someone being taken advantage of, I feel kind of protective towards him/her

Growth Mindset (5-point Likert scale; *Cannot at all to Tremendous amount*)

1. To what extent can teachers increase how much their most difficult students learn from them?
2. To what extent can teachers improve their implementation of different teaching strategies?
3. How much can teachers improve their classroom management approaches?
4. How possible is it for teachers to change how well they relate to their most difficult students?

Multicultural and egalitarian teaching (6-point Likert scale; *agree to disagree*)

1. In the classroom, it is important to be responsive to differences between cultures.
2. It is important for children to learn that people from other cultures can have different values.
3. Respecting other cultures is something that children should learn as early as possible.
4. In counseling parents who have a different cultural background than I do, I try to be considerate of cultural particularities.
5. When meeting with parents of different cultural backgrounds, I spend more time trying to understand and empathize with their perspective.
6. Dealing with cultural diversity should be taught in teacher training courses.
7. Schools should aim to foster and support the similarities between students from different cultural backgrounds.
8. In the classroom, it is important that students of different origins recognize the similarities that exist between them.
9. When there are conflicts between students of different origins, they should be encouraged to resolve the argument by finding common ground.
10. Children should learn that people of different cultural origins often have a lot in common.

Prejudice and motivation (6-point Likert scale; *agree to disagree*): Racial and ethnic minority students...

1. try less hard at school than other students.
2. often have less knowledge than other students.
3. have less interest in topics relevant to school.
4. follow the lessons less attentively than other students.
5. are usually less inquisitive than the other students.

Self-efficacy for teaching racial and ethnic minority students **(6-point Likert scale; agree to disagree)**

1. I am confident that I can address the various concerns of racial and ethnic minority students.
2. I am sure that I can challenge and encourage my racial and ethnic minority students enough.
3. I trust myself to be able to adapt my lessons to the needs of students with a different background.
4. I have confidence that I can inspire students for my subject, regardless of their cultural background.

Enthusiasm for teaching racial and ethnic minority students **(6-point Likert scale; agree to disagree)**

1. I enjoy working with students from different cultural backgrounds.
2. I enjoy teaching racial and ethnic minority students.

Please answer the following four demographic questions about yourself.

1. What is your birth sex?

- a. Female
- b. Intersex
- c. Male
- d. Prefer not to answer

2. What best describes your race/ethnicity (select all that apply)?

- a. Alaskan Native
- b. American Indian, First Nation, or Indigenous
- c. Asian or Asian American
- d. Black or African American
- e. Hispanic, Latino/a/x, or Chicano/a/x
- f. Middle Eastern
- g. Native Hawaiian or Other Pacific Islander
- h. White

3. What best describes your current standing in school?

- a. Freshman
- b. Sophomore
- c. Junior
- d. Senior

4. Number of completed semesters in field placements _____

Thank you for completing the survey. In order to be entered in the drawing for gift cards, please click the link below and it will take you to a separate website. This will enable us to keep your responses to the questions above anonymous while enabling you to enter your email address in the raffle/drawing.

Appendix C

Please read the following vignette about an interaction between a teacher and student and answer some questions about how you believe you would respond in that situation.

Vignette

You are a seventh-grade math teacher at a middle school. It is the middle of the school year. Darius is a 12-year-old student in your fourth period math class. * You just finished a geometry lesson and have asked all of the students to complete two worksheets independently. As you walk around the room to check on the students' progress, you notice that Darius has his head on his desk. After allowing a few minutes to pass, you walk over to him and say, "Please start your worksheets, Darius." He raises his head, turns to you, and says, "Make me."

*In the second survey version this will read, "Cody is a 12-year-old student in your fourth period math class.

1. Which of the following choices describes how you would most likely respond to this situation? (Select one response only)

- a. Ignore it (e.g., continue walking around the room helping other students)
- b. Use humor to defuse the situation
- c. Tell him that you can't "make him" but you would really like for him to get started
- d. Tell him that he can choose between getting started and going to the office, and then follow through with the consequence of going to the office if he does not start.
- e. Send him to the principal's office immediately

2. How inappropriate was Darius' behavior? (Select one response only)

- a. It was not inappropriate
- b. Slightly inappropriate
- c. Somewhat inappropriate
- d. Very inappropriate
- e. Extremely inappropriate

3. How likely do you think Darius is to engage in this behavior (or a very similar behavior) in the future? (Select one response only)

- a. Extremely unlikely
- b. Very unlikely
- c. Somewhat unlikely
- d. Somewhat likely
- e. Very likely

f. Extremely likely

In the next part of the study, please answer some general questions about your thoughts, behavior, and beliefs about teaching.

Race Essentialism (7-point Likert scale; Do not agree to Strongly agree)

1. If a Black American family traveled around the world, people they met would probably think of them as Black, too.
2. The physical features of different racial groups haven't really changed much over the centuries.
3. The same racial categories have pretty much always existed.
4. It's impossible to determine how a person will be racially categorized by examining their DNA. (R)
5. No one can change his or her race—you are who you are.
6. If a White American family traveled around the world, people they met would probably think of them as White, too.
7. It's natural to notice the racial group to which people belong.
8. I believe physical features determine race.
9. Generally speaking, two Black people will always look more similar to each other than a Black person and a White person ever would.
10. How a person is defined racially depends on the social context. (R)
11. Siblings born to the same parents will always be of the same race as each other.
12. Young children probably learn about which people fall into which racial groups automatically, without much help from adults.
13. A person's race is fixed at birth.
14. The political climate can dictate whether someone is categorized as Black or White. (R)
15. In 200 years, society will use basically the same racial categories.
16. There's agreement across cultures about which racial groups people fall into.
17. The average person is highly accurate at identifying people by race.
18. People who are of different races may look quite similar to each other. (R)
19. Racial categories haven't always existed in the world. (R)
20. It's easy to tell what race people are by looking at them.
21. Racial groups are primarily determined by biology.
22. It's possible to be a full member of more than one race. (R)

Social Desirability

1. It is sometimes hard for me to go on with my work if I am not encouraged.
True
False
2. I sometimes feel resentful when I don't get my own way.
True

False

3. On a few occasions, I have given up doing something because I thought too little of my ability.

True

False

4. There have been times when I felt like rebelling against people in authority even though I knew they were right.

True

False

5. No matter who I'm talking to, I'm always a good listener.

True

False

6. There have been occasions when I took advantage of someone.

True

False

7. I'm always willing to admit it when I make a mistake.

True

False

8. I sometimes try to get even, rather than forgive and forget.

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9. I am always courteous, even to people who are disagreeable.

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10. I have never been irked when people expressed ideas very different from my own.

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11. There have been times when I was quite jealous of the good fortune of others.

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False

12. I am sometimes irritated by people who ask favors of me.

True
False

13. I have never deliberately said something that hurt someone's feelings.

True
False

Empathy (5-point Likert scale; *Never to Always*)

1. When someone else is feeling excited, I tend to get excited too
2. Other people's misfortunes do not disturb me a great deal
3. It upsets me to see someone being treated disrespectfully
4. I remain unaffected when someone close to me is happy
5. I enjoy making other people feel better
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7. When a friend starts to talk about his/her problems, I try to steer the conversation towards something else
8. I can tell when others are sad even when they do not say anything
9. I find that I am "in tune" with other people's moods
10. I do not feel sympathy for people who cause their own serious illnesses
11. I become irritated when someone cries
12. I am not really interested in how other people feel
13. I get a strong urge to help when I see someone who is upset
14. When I see someone being treated unfairly, I do not feel very much pity for them
15. I find it silly for people to cry out of happiness
16. When I see someone being taken advantage of, I feel kind of protective towards him/her

Growth Mindset (5-point Likert scale; *Cannot at all to Tremendous amount*)

1. To what extent can teachers increase how much their most difficult students learn from them?
2. To what extent can teachers improve their implementation of different teaching strategies?
3. How much can teachers improve their classroom management approaches?
4. How possible is it for teachers to change how well they relate to their most difficult students?

Multicultural and egalitarian teaching (6-point Likert scale; *agree to disagree*)

1. In the classroom, it is important to be responsive to differences between cultures.
2. It is important for children to learn that people from other cultures can have different values.
3. Respecting other cultures is something that children should learn as early as possible.

4. In counseling parents who have a different cultural background than I do, I try to be considerate of cultural particularities.
5. When meeting with parents of different cultural backgrounds, I spend more time trying to understand and empathize with their perspective.
6. Dealing with cultural diversity should be taught in teacher training courses.
7. Schools should aim to foster and support the similarities between students from different cultural backgrounds.
8. In the classroom, it is important that students of different origins recognize the similarities that exist between them.
9. When there are conflicts between students of different origins, they should be encouraged to resolve the argument by finding common ground.
10. Children should learn that people of different cultural origins often have a lot in common.

Prejudice and motivation (**6-point Likert scale; agree to disagree**): Racial and ethnic minority students...

1. try less hard at school than other students.
2. often have less knowledge than other students.
3. have less interest in topics relevant to school.
4. follow the lessons less attentively than other students.
5. are usually less inquisitive than the other students.

Self-efficacy for teaching racial and ethnic minority students (**6-point Likert scale; agree to disagree**)

1. I am confident that I can address the various concerns of racial and ethnic minority students.
2. I am sure that I can challenge and encourage my racial and ethnic minority students enough.
3. I trust myself to be able to adapt my lessons to the needs of students with a different background.
4. I have confidence that I can inspire students for my subject, regardless of their cultural background.

Enthusiasm for teaching racial and ethnic minority students (**6-point Likert scale; agree to disagree**)

1. I enjoy working with students from different cultural backgrounds.
2. I enjoy teaching racial and ethnic minority students.

Please answer the following four demographic questions about yourself.

1. What is your birth sex?

- e. Female
- f. Intersex
- g. Male
- h. Prefer not to answer

2. What best describes your race/ethnicity (select all that apply)?

- a. Alaskan Native
- b. American Indian, First Nation, or Indigenous
- c. Asian or Asian American
- d. Black or African American
- e. Hispanic, Latino/a/x, or Chicano/a/x
- f. Middle Eastern
- g. Native Hawaiian or Other Pacific Islander
- h. White

3. Number of completed years in teaching _____

Thank you for completing the survey. In order to receive the gift card, please click the link below and it will take you to a separate website. This will enable us to keep your responses to the questions above anonymous while enabling you to receive the electronic gift card.

Appendix D Excerpt Vignette

Before getting started, please read the article excerpt below to check for reading comprehension. **

Does race really exist? Are the qualities of different races exclusive, unique, and unchanging? After conducting extensive field study and archival research, the Ethnology Research Center at the University of Geneva concluded that humankind is indeed made up of different races. Each racial group possesses unique and inalterable attributes, known as racial essence. A well-known cross-cultural researcher, Professor George Levinger, reviewed a large number of research findings from biology, archeology, and cultural anthropology on race and social development. The results suggested that, in fact, the members within each racial group shared similar traits: they all shared common languages, resided in areas with similar social economic environment, and possessed similar cultural and psychological qualities. These unique characteristics within each racial group formed the link among its members, increased group cohesion and their entitativity. He concluded that “race” biologically determines an important part of an individual’s dispositions.

**Condition 2 will include the alternative article excerpt:

Does race really exist? Are the qualities of different races exclusive, unique, and unchanging? The Division of Cultural Anthropology at the University of Geneva conducted surveys asking people for their definition of race. The results showed that people’s understanding of “race” is extremely ambiguous. Some respondents said that there were over a hundred races; others thought that there were two hundred; yet some others suggested that there were several thousand or that they were unsure. In fact, the meaning of race, a concept that people have taken for granted, is not so apparent to lay people after all. A well-known cross-cultural researcher, Professor George Levinger, reviewed a large number of research findings from biology, archeology, and cultural anthropology on race and social development. The results suggested that, in fact, all human beings have the same ancestry and that racial differences have resulted from adaptation to diverse environments. He concluded that a biological basis of “race” is unfounded. Race is nothing more than a social construction.

1. Please describe the main theme of the excerpt.

Now, please read the following vignette about an interaction between a teacher and student and answer some questions about how you believe you would respond in that situation.

Vignette

You are a seventh-grade math teacher at a middle school. It is the middle of the school year. Darius is a 12-year-old student in your fourth period math class. * You just finished

a geometry lesson and have asked all of the students to complete two worksheets independently. As you walk around the room to check on the students' progress, you notice that Darius has his head on his desk. After allowing a few minutes to pass, you walk over to him and say, "Please start your worksheets, Darius." He raises his head, turns to you, and says, "Make me."

*In the second survey version this will read, "Cody is a 12-year-old student in your fourth period math class.

1. Which of the following choices describes how you would most likely respond to this situation? (Select one response only)

- a. Ignore it (e.g., continue walking around the room helping other students)
- b. Use humor to defuse the situation
- c. Tell him that you can't "make him" but you would really like for him to get started
- d. Tell him that he can choose between getting started and going to the office, and then follow through with the consequence of going to the office if he does not start.
- e. Send him to the principal's office immediately

2. How inappropriate was Darius' behavior? (Select one response only)

- a. It was not inappropriate
- b. Slightly inappropriate
- c. Somewhat inappropriate
- d. Very inappropriate
- e. Extremely inappropriate

3. How likely do you think Darius is to engage in this behavior (or a very similar behavior) in the future? (Select one response only)

- a. Extremely unlikely
- b. Very unlikely
- c. Somewhat unlikely
- d. Somewhat likely
- e. Very likely
- f. Extremely likely

In the next part of the study, please answer some general questions about your thoughts, behavior, and beliefs about teaching.

Race Essentialism (7-point Likert scale; Do not agree to Strongly agree)

1. If a Black American family traveled around the world, people they met would probably think of them as Black, too.
2. The physical features of different racial groups haven't really changed much over the centuries.
3. The same racial categories have pretty much always existed.
4. It's impossible to determine how a person will be racially categorized by examining their DNA. (R)
5. No one can change his or her race—you are who you are.
6. If a White American family traveled around the world, people they met would probably think of them as White, too.
7. It's natural to notice the racial group to which people belong.
8. I believe physical features determine race.
9. Generally speaking, two Black people will always look more similar to each other than a Black person and a White person ever would.
10. How a person is defined racially depends on the social context. (R)
11. Siblings born to the same parents will always be of the same race as each other.
12. Young children probably learn about which people fall into which racial groups automatically, without much help from adults.
13. A person's race is fixed at birth.
14. The political climate can dictate whether someone is categorized as Black or White. (R)
15. In 200 years, society will use basically the same racial categories.
16. There's agreement across cultures about which racial groups people fall into.
17. The average person is highly accurate at identifying people by race.
18. People who are of different races may look quite similar to each other. (R)
19. Racial categories haven't always existed in the world. (R)
20. It's easy to tell what race people are by looking at them.
21. Racial groups are primarily determined by biology.
22. It's possible to be a full member of more than one race. (R)

Social Desirability

2. It is sometimes hard for me to go on with my work if I am not encouraged.
 - True
 - False

2. I sometimes feel resentful when I don't get my own way.
 - True
 - False

3. On a few occasions, I have given up doing something because I thought too little of my ability.
 - True

False

4. There have been times when I felt like rebelling against people in authority even though I knew they were right.

True

False

5. No matter who I'm talking to, I'm always a good listener.

True

False

6. There have been occasions when I took advantage of someone.

True

False

7. I'm always willing to admit it when I make a mistake.

True

False

8. I sometimes try to get even, rather than forgive and forget.

True

False

9. I am always courteous, even to people who are disagreeable.

True

False

10. I have never been irked when people expressed ideas very different from my own.

True

False

11. There have been times when I was quite jealous of the good fortune of others.

True

False

12. I am sometimes irritated by people who ask favors of me.

True

False

13. I have never deliberately said something that hurt someone's feelings.

True

False

Empathy (5-point Likert scale; *Never to Always*)

1. When someone else is feeling excited, I tend to get excited too
2. Other people's misfortunes do not disturb me a great deal
3. It upsets me to see someone being treated disrespectfully
4. I remain unaffected when someone close to me is happy
5. I enjoy making other people feel better
6. I have tender, concerned feelings for people less fortunate than me
7. When a friend starts to talk about his/her problems, I try to steer the conversation towards something else
8. I can tell when others are sad even when they do not say anything
9. I find that I am "in tune" with other people's moods
10. I do not feel sympathy for people who cause their own serious illnesses
11. I become irritated when someone cries
12. I am not really interested in how other people feel
13. I get a strong urge to help when I see someone who is upset
14. When I see someone being treated unfairly, I do not feel very much pity for them
15. I find it silly for people to cry out of happiness
16. When I see someone being taken advantage of, I feel kind of protective towards him/her

Growth Mindset (5-point Likert scale; *Cannot at all to Tremendous amount*)

1. To what extent can teachers increase how much their most difficult students learn from them?
2. To what extent can teachers improve their implementation of different teaching strategies?
3. How much can teachers improve their classroom management approaches?
4. How possible is it for teachers to change how well they relate to their most difficult students?

Multicultural and egalitarian teaching (6-point Likert scale; *agree to disagree*)

1. In the classroom, it is important to be responsive to differences between cultures.
2. It is important for children to learn that people from other cultures can have different values.
3. Respecting other cultures is something that children should learn as early as possible.
4. In counseling parents who have a different cultural background than I do, I try to be considerate of cultural particularities.
5. When meeting with parents of different cultural backgrounds, I spend more time trying to understand and empathize with their perspective.
6. Dealing with cultural diversity should be taught in teacher training courses.

7. Schools should aim to foster and support the similarities between students from different cultural backgrounds.
8. In the classroom, it is important that students of different origins recognize the similarities that exist between them.
9. When there are conflicts between students of different origins, they should be encouraged to resolve the argument by finding common ground.
10. Children should learn that people of different cultural origins often have a lot in common.

Prejudice and motivation **(6-point Likert scale; agree to disagree)**: Racial and ethnic minority students...

1. try less hard at school than other students.
2. often have less knowledge than other students.
3. have less interest in topics relevant to school.
4. follow the lessons less attentively than other students.
5. are usually less inquisitive than the other students.

Self-efficacy for teaching racial and ethnic minority students **(6-point Likert scale; agree to disagree)**

1. I am confident that I can address the various concerns of racial and ethnic minority students.
2. I am sure that I can challenge and encourage my racial and ethnic minority students enough.
3. I trust myself to be able to adapt my lessons to the needs of students with a different background.
4. I have confidence that I can inspire students for my subject, regardless of their cultural background.

Enthusiasm for teaching racial and ethnic minority students **(6-point Likert scale; agree to disagree)**

1. I enjoy working with students from different cultural backgrounds.
2. I enjoy teaching racial and ethnic minority students.

Please answer the following four demographic questions about yourself.

1. What is your birth sex?

- i. Female
- j. Intersex
- k. Male
- l. Prefer not to answer

2. What best describes your race/ethnicity (select all that apply)?

- a. Alaskan Native
- b. American Indian, First Nation, or Indigenous
- c. Asian or Asian American
- d. Black or African American
- e. Hispanic, Latino/a/x, or Chicano/a/x
- f. Middle Eastern
- g. Native Hawaiian or Other Pacific Islander
- h. White

3. What best describes your current standing in school?

- a. Freshman
- b. Sophomore
- c. Junior
- d. Senior
- e. Graduate student

4. Number of completed semesters in field placements _____

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