

**The Association Between Race Based Traumatic Stress Symptoms, Academic Self-Efficacy,  
and Social Support in Black University Students**

By

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## Abstract

A substantial body of research has examined the unique yet difficult experiences of Black students at predominantly White institutions (PWIs). This study (N= 99) builds on previous research to examine the association between race based traumatic stress symptoms, academic self-efficacy, and social support in Black students attending a PWI. Specifically, the study attempted to determine if there was an association between Black students who experience race based traumatic stress symptoms and their levels of academic self-efficacy. The study also explored whether tailored social support moderated the relationship between race based traumatic stress symptoms and academic self-efficacy. It was hypothesized that higher symptoms of race based traumatic stress will predict lower academic self-efficacy in Black students, tailored and general social support will positively predict academic self-efficacy in Black students and moderate the relationship between race based traumatic stress symptoms and academic self-efficacy. A hierarchical multiple regression analysis was used to analyze the data and results indicated mixed findings. Clinical implications and directions for future research are discussed.

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## I. Introduction

The history of Black people in the United States continues to impact the ways in which this population navigates and understands their life experiences (Thompson & Neville, 1999). Their historical status as enslaved persons was justified legally for more than a century (Yang, 2014). Despite their resilience, the lasting impacts of slavery has not left Black people unscathed. Current unjust experiences for this population may manifest as microaggressions, discrimination, and legal injustices (Sue, Capodilupo, & Holder, 2008). Repeated experiences with racism can lead to an individual's inability to cope, causing chronic stress and/or trauma reactions (Bryant-Davis & Ocampo, 2005). Exploring how racist incidents manifest into trauma has recently been examined and defined in the literature as race based traumatic stress (Carter, 2007; Carter, 2017). For an individual to experience race based traumatic stress, the racist incident must be perceived as negative, sudden, and uncontrollable (Carter, 2007). The individual must also have some level of intrusion, avoidance, or arousal (Carter, 2007). The majority of research on race based traumatic stress has focused on conceptualization (Carter, 2007), scale development (Carter et al., 2013; Carter et al., 2017), and implications for counseling (Bryant-Davis, 2007; Carter, 2007, Evans, Hemmings, Burkhalter, & Lacy, 2016; Hemmings & Evans, 2018; Lemberger & Lemberger-Truelove, 2016; Paxton, 2017; Pieterse, 2018). Further exploring this construct and how it manifests in people of color will enhance the racial trauma literature and provide insight into their unique experiences.

Due to frequent experiences of racism on college campuses (Cokley et al., 2011; Hotchkins & Dancy, 2017; Morales, 2020; Sanders-Thompson, 2002; Sellers & Shelton, 2003), Black students may be more susceptible to symptoms of race based traumatic stress during this time. Furthermore, academic self-efficacy may suffer due to messages about one's ethnic

identity, experiences with racism, and university climate. Past research has examined racial differences in academic self-efficacy (Mayo & Christenfeld, 1999; Peguero & Shaffer, 2015). However, an extensive literature review found no research on the association between race based traumatic stress symptoms and academic self-efficacy. Examining the association between race based traumatic stress symptoms and academic self-efficacy in Black university students may further aide researchers in understanding the impact of race based traumatic stress on this population, as well as racial differences in the academic self-efficacy literature.

Additionally, an external factor to consider when examining the relationship between race based traumatic stress symptoms and academic self-efficacy is the individual's perceived level of support. Black people tend to rely on social support as a coping strategy after experiencing a racist incident (Thompson, 2006). Literature posits that social support is most effective when it targets the needs brought on by the stressor (Cutrona & Russell, 1990). Research has further supported this claim when examining social support versus tailored social support and racial stressors (Seawell et al., 2014). Tailored social support was shown to be more effective in addressing the needs of the individual. Specifically, high levels of tailored social support protected against negative impacts of racial discrimination (Seawell et al., 2014). Based on research, tailored social support is expected to also protect against negative effects of race based traumatic stress symptoms in Black university students.

This dissertation examined the association between the three aforementioned constructs (i.e., race based traumatic stress symptoms, tailored social support, and academic self-efficacy) in Black university students. Additionally, tailored social support was examined as a moderator. It was hypothesized that higher symptoms of race based traumatic stress predicted lower academic self-efficacy in Black university students. Furthermore, it was predicted that tailored

social support moderated the relationship between race based traumatic stress symptoms and academic self-efficacy.



## II. Review of Literature

Although the literature on racism is extensive, it is not exhaustive. The impact of racism is ever changing and evolving. Meta-analysis research found psychological (Pieterse et al., 2012) and physical (Paradies et al., 2015) outcomes to be directly associated with experiences of racism in Black individuals. Furthermore, researchers have found trauma responses in Black people who experience chronic racist incidents (Carter, 2007). In an effort to bring awareness to the impact of chronic racism on this population, this dissertation focuses on race based traumatic stress, academic self-efficacy, and tailored social support in Black college students.

### Experiences with Racism

**Types of Racism.** *Racism* is defined as beliefs, attitudes, institutional arrangements, and behaviors that disadvantage and belittle individuals or groups because of skin color (Clark et al., 1999). In its most brutal form this has manifested as slavery in the United States. Today racism takes on multiple definitions (Carter, 2007) and experiences for people of color (i.e., historically disenfranchised Black and African American, Native American, Latinx, Asian, and other racial/ethnic minority groups). Jones (2001) proposed three levels of racism: institutional, individual, and internal. *Institutionalized racism* is defined as differential access to the goods, services, and opportunities of society by race (Jones, 2001). This type of racism is structural and implemented into institutions of custom, practice, and law (Jones, 2001). In short, institutionalized racism manifests itself in material conditions and access to power (Jones, 2001). Examples of material conditions may include differential access to quality education, housing, employment, appropriate medical facilities, and a clean environment (Jones, 2001). Examples of access to power include differential access to information, resources, and voice. *Individual racism* is defined as “prejudice and discrimination, where prejudice is differential assumptions

about the abilities, motives, and intents of others by race, and discrimination is differential actions toward others by race” (Jones, 2001, p. 300). This is what most people think of when they hear the word “racism.” This type of racism can be intentional or unintentional. It manifests as lack of respect, suspicion, devaluation, scapegoating, and dehumanization (Jones, 2001). *Internalized racism* refers to the acceptance, by marginalized racial populations, of the negative societal beliefs and stereotypes about themselves (Jones, 2001). These beliefs reinforce the superiority of Whites and devalue people of color and can lead to the perception of oneself as worthless and powerless (Jones, 2001). Internalized racism manifests as embracing whiteness, self-devaluation, helplessness, and hopelessness (Jones, 2001). All levels of racism are interconnected and work against people of color.

**People of Color.** Freire (1970) describes oppression as a process of dehumanization that creates social and physical isolation, as well as lack of access and blocked opportunities in education, employment, health, and sociopolitical status. Racism is the most prevalent form of oppression in the United States and continues to prevail in society today. A large body of literature demonstrates that racial and ethnic minorities face persistent discrimination in housing, employment, and mortgage lending (Smedley, 2012). In fact, one of the most significant examples of institutional racism is residential segregation (Williams & Collins, 2001). Many racial and ethnic minorities live in majority minority communities that, on average, suffer from a numerous amount of health risks (i.e., environmental degradation, unhealthy foods, tobacco, and alcohol products) and a relative lack of health-enhancing resources (e.g., access to health care providers, grocery stores, safe parks, and recreational facilities; Williams & Collins, 2001). These circumstances influence both physical and mental health through conditions such as levels of crime and violence, overcrowding, and environmental exposures. Daily microaggressions are

another example of racism that is a common experience for people of color (Sue et al., 2007). Microaggressions are defined as “brief verbal, behavioral, or environmental indignities, intentional or unintentional, that communicate hostile, derogatory, or negative racial insults toward people of color” (Sue et al., 2007, p. 271). People of color are psychologically and physically harmed by this treatment because racism and discrimination are forms of violence (Smedley, 2012).

**Black People.** Black people (i.e., individuals whose ancestors are from Africa, including those who identify as Jamaican, Haitian, and/or African; U.S. Census Bureau, 2011) are especially impacted by these consequences based on their historical treatment as enslaved persons in America. The treatment of Black people has evolved beyond slavery and developed into other disadvantages distinct from other minority groups. The harming of Black bodies from police has occurred since slavery, however it has acquired international attention due to technology and video cameras (Alang et al., 2017). Black people are significantly more likely to experience police brutality (i.e., excessive force) than are White people (Alang et al., 2017). They are almost five times more likely than Whites to have a police intervention-related injury (Alang et al., 2017). Additionally, young Black men are nine times more likely than any other race or gender to be killed by police officers (Alang et al., 2017). These findings highlight the way institutional and individual racism is interconnected. Police officers who enforce the law and also fall susceptible to their own prejudice and/or discriminatory beliefs are detrimental for Black people. Negative interactions with police officers can start in high school, especially in urban schools with metal detectors and a heavy police presence (Allen & White-Smith, 2014). Harsh and punitive practices in school systems can affect disadvantaged students, like Black males, resulting in greater tendency for these students to become incarcerated. In fact, high

school dropout rates are often used to predict space for state prisons (Allen & White-Smith, 2014). This school to prison pipeline fails to provide quality education for young Black men and functions as a component of institutionalized racism (Grace & Nelson, 2019).

**Black University Students.** Black college and university students have a unique experience distinct from other Black adults. Some students are living away from home for the first time and undergoing adjustment to campus, making friends, finding their niche, and performing under more pressure than in high school. Research has indicated African American college students to be frequent targets of racist incidents (Sellers & Shelton, 2003). When compared to other races (i.e., Asians, Latinx, and Whites), African American students reported the highest levels of perceived racial discrimination (Contrada et al., 2001). Furthermore, perceived discrimination was shown to be related to symptoms of depression (Contrada et al., 2001). Cokley et al. (2011) also found similar results. Specifically, their research looked at minority college students and found that African American students were most likely to perceive racial discrimination compared to their peers (Cokley et al., 2011). Additionally, college students (White, Black, Hispanic, and Asian) in the southeast United States were asked if they thought racial hostility existed between racial groups at their university and 75% of students said “yes, just not expressed openly” (Biasco et al., 2001, p.526). Students also thought that Black students were the most frequent targets of racial hostility (Biasco et al., 2001). This finding is consistent with previous literature indicating Black university students experience frequent, if not more, racist incidents than their peers. Furthermore, it appears that African Americans self-report a higher impact of discrimination than European Americans (Sanders-Thompson, 2002). Therefore, not only are Black students experiencing more racist incidents, but these incidents have a stronger impact on them than other racial groups.

Racism impacts Black university students in many different ways. Specifically, sleep problems have been found to correlate with frequent experiences of discrimination in African American students who attend PWIs (Fuller-Rowell et al., 2020). Additionally, African American students who report more experiences with racial discrimination also indicate higher than average levels of binge drinking compared to other students, indicating some relationship between racism and alcohol use (Metzger, 2017). Subsequent research has confirmed this relationship specifically in African American women in college. Results found that increased experiences of racism increased risky drinking behaviors (Pittman & Kaur, 2018). Perceived racism was found to be significantly associated with alcohol use (Pittman & Kaur, 2018). Poor sleep and increased substance use during college are likely to impact academic performance in Black students. Literature has also indicated a positive association between racial discrimination and anxiety symptom distress with moderate and high levels of internalization of negative stereotypes in Black college students attending a PWI (Sosoo, Bernard, & Neblett, 2019). Additional research found that racial microaggressions have damaging impacts on the emotional health of students of color (Forrest-Bank & Cuellar, 2018). Racism has a clear impact on Black university students. Exploring this impact in relation to other constructs may further build on the literature and aide universities in retaining Black students.

### **Consequences of Racism**

**Racism and Physical Well-being.** There is a large amount of literature indicating the detrimental effects of racism on people of color. An area in particular is their health and physical well-being. Numerous studies have explored the effects of racism on health outcomes (Carter et al., 2017; Paradies et al., 2015). Specifically, racism has been associated with an increase in blood pressure, cardiovascular disease, hypertension, and cholesterol (Paradies et al., 2015). For

example, perceived racism in academic settings was associated with higher diastolic blood pressure in African American college students during waking hours and nighttime sleep (Hill et al., 2007). Perceived racism in the workplace has also been associated with hypertension in African Americans (Din-Dzietham et al., 2004). Self-reported experiences of racial discrimination and the internalization of negative racial group attitudes were found to be risk factors for cardiovascular disease among African American men (Chae et al., 2010). Consistent with previous findings, repeated subjection to racial discrimination is associated with higher blood pressure levels and more frequent diagnoses of hypertension in African Americans (Mays, Cochran, & Barnes, 2007). Taylor et al. (2007) found that Black women who reported experiencing racial discrimination were 31% more likely to develop breast cancer than were those who did not report racial discrimination. Not only does racism affect the health of people of color, but it may also serve as a barrier to seeking and receiving health care services. African Americans have reported experiencing racism during health care interactions (Peters, 2006). These experiences deter African Americans and people of color from seeking services, furthering the gap in health disparities across races.

Racist incidents can also trigger chronic stress and impair the well-being of racial minorities (Brendtro & Mitchell, 2013; Carter, 2007). African Americans who experience discrimination describe it as stressful and for many of them this stress persists for two months to over a year after the incident (Carter & Forsyth, 2010). Chronic stress or prolonged stress is more severe than acute stress. Acute stress tends to have a specific stressor and results from specific events or situations. Acute stress goes away shortly after the stressor is alleviated. Chronic stress, however, results from repeated exposure to situations that lead to a release of stress hormones (Centre For Studies on Human Stress, n.d.). Researchers believe the human stress response

system was not designed to be repeatedly, chronically activated (Centre For Studies on Human Stress, n.d.). This type of stress can cause a strain in the mind and body. Even the anticipation of a stressful event or situation happening can cause negative side effects. Hickens et al. (2014) found that anticipatory stress was higher for Black Americans compared to Hispanic and White adults. For every unit increase in vigilance there was a 4% increase in the odds of hypertension in Black Americans (Hickens et al., 2014). The findings of this study emphasize the impact of racist incidents on people of color. The anticipation alone is physiologically detrimental to their health.

**Racism and psychological well-being.** Racist incidents also have the ability to impair psychological well-being in Black people. Research has found that daily microaggressions were related to depression and anxiety (Carter, 2007). These effects can impair daily functioning and pleasurable activities in people of color. Discrimination is also associated with high levels of stress, less life satisfaction, and negative mood (Carter, 2007). Chronic exposure to racism has also been linked to anxiety, depression, and substance abuse (Burke, 1984; Utsey & Payne, 2000), lowered life satisfaction and self-esteem (Broman, 1997), feelings of trauma, loss, and helplessness (Carter, 2007; Fernando, 1984), cultural mistrust (Combs et al., 2006), poor quality of life, less life satisfaction, and depression (Noh & Kaspar, 2003; Utsey & Payne, 2000).

Furthermore, racial discrimination and psychological distress are found to be related specifically in Black people (Lee & Ahn, 2013). Racial discrimination has been linked with greater depression (Ashburn-Nardo, Monteith, Arthur, & Bain, 2007; Jones, 2005; Jones, Cross, & DeFour, 2007; Rivas- Drake, Hughes, & Way, 2008), internalizing problems (DuBois, Burk-Braxton, Swenson, Tevendale, & Hardesty, 2002), reductions in well-being (Sellers, Copeland-Linder, Martin, & Lewis, 2006), and low self-esteem (Franklin-Jackson & Carter 2007) in Black

people. Institutional racism is also a significant predictor of one's social functioning, emotional well-being, and mental health in African American elderly populations (Utsey et al., 2002). Elderly African Americans are likely to have lived through Jim Crow, housing restrictions, voting restrictions, and other laws that prohibited them from privileges they are entitled to. These experiences with institutional racism have shown to have lasting effects on African Americans (Utsey et al., 2002). Specifically, institutional racism alone was a significant predictor of the Mental Component Summary (MCS) measures for Utsey et al.'s (2002) sample of elderly African Americans. The MCS is a composite summary measure of one's vitality, social functioning, emotional well-being, and mental health (Ware et al., 1994).

Additionally, perceived racism is also associated with suicidal ideation in African American adults (Walker et al., 2014). This is highly alarming due to the common mental health stigma in communities of color. Research indicates that low income individuals and people of color may be hesitant to engage in mental health care because of fear or mistrust due to historical persecution and racism (Santiago et al., 2013) within the mental health care system, which has led to misdiagnosis and inappropriate treatments. Furthermore, when compared to other races, African Americans and biracial individuals are the least likely to seek professional mental health services to deal with their racist experiences (Carter & Forsyth, 2010). Other factors like lack of representation in the mental health field may also contribute to people of color not seeking treatment (DHHS, 2001). This lack of treatment typically results in poorer clinical, psychosocial, and socioeconomic outcomes (Hantzi, Anagnostopoulos, & Alexiou, 2018).

Based on research, it is clear that people of color and more specifically, Black people, are at risk for harmful psychological and physical effects of racism at all stages of life development. Pieterse et al. (2012) conclude in their meta-analysis that Black people's negative psychological



responses to racism carry many features associated with trauma. These findings are consistent with a growing empirical literature that has reported positive associations between negative racial experiences and trauma-related symptoms (Pieterse et al., 2010; Polanco-Roman et al., 2016).

**Race Based Traumatic Stress.** While there are a multitude of different effects due to negative race related experiences, a concept that has recently been discussed in the literature is race based traumatic stress. A moderate amount of research (Bryant-Davis, 2007; Bryant-Davis & Ocampo 2005; Carter, 2006, 2007; Franklin & Carter, 2007, Hardy, 2013) has examined the notion that negative race related experiences can lead to trauma-like symptoms in Black individuals. APA's (2013) traditional definition of trauma as defined under Post Traumatic Stress Disorder (PTSD) requires exposure to actual or threatened death, serious injury, or sexual violence. This manifests as direct exposure, witnessing it happen to someone, learning that it happened to a close friend/family member, or experiencing repeated/extreme exposure to details of the event (APA, 2013). Similar to PTSD, Carter (2007) conceptualized racism or racist incidents as an emotional injury. More specifically, *racist incidents* are cognitive or affective assaults on one's ethnic self-identification (Bryant-Davis & Ocampo, 2005). These assaults can be verbal or physical attacks and/or threatening to an individual's livelihood. They can be sudden, systematic, intentional, unintentional, overt, or ambiguous, and committed by an institution or individual (Bryant-Davis & Ocampo, 2005). While race based traumatic stress does not fully meet PTSD criteria due to PTSD's recognized definition as exposure to actual or threatened death, serious injury, or sexual violence, it has significant overlap, especially with symptoms.

Like explored previously, the impacts of these incidents can lead to negative

psychological and physiological effects (Clark et al., 1999). These negative effects can cause profound changes in a person's sense of self and lead to an adjustment or stress disorder. It is also possible that some individuals may experience trauma-like symptoms as a result of racist incidents, causing further distress and/or impaired functioning. Examples of trauma-like symptoms include, but are not limited to, hypervigilance, paranoia, avoidance, unwanted cognitive reminders, and/or an inability to concentrate (APA, 2013). The idea that racism is tied to trauma has recently evolved in the literature creating the term *racial trauma* (Bryant Davis & Ocampo, 2005; Hardy, 2013) or, more specifically for the purpose of this dissertation, *race based traumatic stress*. *Race based traumatic stress* is defined as:

An emotional injury that is motivated by hate or fear of a person or group of people as a result of their race; a racially motivated stressor that overwhelms a person's capacity to cope; a racially motivated, interpersonal severe stressor that causes bodily harm or threatens one's life integrity; or a severe interpersonal or institutional stressor motivated by racism that causes fear, helplessness, or horror. (Bryant-Davis, 2007, p. 135-136)

Using this definition, for traumatic stress to be present, one must perceive the incident as negative (i.e., emotionally painful), sudden, and uncontrollable (Carlson, 1997). Individuals must also have some form of intrusion, avoidance, and arousal (Carter, 2007).

Despite the frequency and detrimental effects of racist incidents, there is little research exploring race based traumatic stress in people of color. Direct experience with harassment (i.e., racial hostility) was associated with more hypervigilant and anxious reactions in people of color (Carter & Forsyth, 2010). Additionally, people of color experience higher rates of PTSD compared to their White counterparts (Williams et al., 2018). This may be due to added race based traumatic stress. College students have also been shown to display trauma-like symptoms due to race related experiences. Specifically, after experiencing racism some doctoral students of color may cope with avoidance (Truong & Museus, 2012). Undergraduate level students also

display trauma-like symptoms after experiencing a racist incident. Specifically, some students of color indicate dissociating (i.e., depersonalization/derealization; Polanco-Roman et al., 2016), which is a common response among trauma survivors. Additionally, perceived racial discrimination in Chinese international students predicted trauma-like symptoms (i.e., repeated, disturbing memories, thoughts, or images of racial discrimination experiences or feeling very upset when reminded of the racial discrimination experiences; Wei et al., 2012). These findings further support the concept of race based traumatic stress. Additionally, when compared to other races, Pieterse et al. (2010) found that African American students perceive racial climate on campus as more negative than Asian and White students. After controlling for daily life stressors, perceived racial discrimination contributed to trauma-related symptoms (i.e., hyperarousal and emotional numbing) the most in African American students (Pieterse et. al, 2010). Although research is scarce, the research available does suggest a connection between racism and trauma-related outcomes. Furthermore, Black students appear to perceive more racial discrimination (Cokley et al., 2011), are more impacted by racist incidents (Sanders-Thompson, 2002), and are more likely to display trauma related symptoms due to perceived discrimination compared to other races (Pieterse et. al, 2010). Based on the aforementioned findings, Black university students will be the target population of this study.

In addition, due to the frequent prevalence of racism occurring in the educational system (Ellis et al., 2018), it is imperative to explore how these incidents impact academic self-efficacy in Black university students. Racial microaggressions have been found to influence the academic lives of students (i.e., academic motivation and college academic self-efficacy; Smith, 2018). This is important to explore because self-efficacy and outcome expectations work together to influence academic achievement (Bandura 1977, 1986). However, self-efficacy is thought to be

the stronger predictor of achievement when compared to outcome expectations (Bandura 1977, 1986). If racist incidents impact academic self-efficacy (Smith, 2018), race based traumatic stress is also capable of doing the same. Therefore, exploring academic self-efficacy in Black university students and how it is impacted by race based traumatic stress will aide psychologists, educators, and administrators on how to support and develop programs to ensure growth and success for this population.

### **Academic Self-Efficacy**

**Self-Efficacy Theory.** Schunk (1991) summarizes Bandura's definition of *self-efficacy* as "an individual's conviction that they can successfully perform given tasks at designated levels" (p. 207). Bandura's self-efficacy theory is a social-cognitive approach that describes task-specific self-confidence and how the level of an individuals' confidence influences what they do (Yiu et al., 2012). Specifically, individuals who feel efficacious are more likely to work harder and persist longer when they encounter adversity compared to individuals who doubt their capabilities (Schunk, 1991). Bandura suggested four categories of experience that may be involved in the development of self-efficacy: enactive mastery (i.e., personal attainments), vicarious experience (i.e., modeling), verbal persuasion, and physiological arousal (Yiu et al., 2012). An example of enactive mastery would be personal success at a task strengthening self-efficacy. Research has found that success tends to raise efficacy and failure tends to lower it, however, once a strong sense of efficacy is developed, a failure may not have much of an impact (Bandura, 1986). An example of vicarious experience or modeling would be seeing someone else perform a task successfully and thus feeling more confident in one's own ability to do it. An example of verbal persuasion would be receiving encouragers that one can complete a task. An example of physiological arousal would be somatic symptoms like sweating and increased heart

rate, signaling anxiety to an individual and thus interpreted as a lack of skills (Schunk, 1991). The individual's cognitive appraisal of these four experiences usually determines self-efficacy (Bandura, 1982; Gist and Mitchell, 1992). Furthermore, self-efficacy affects the choices individuals make about how to spend their time (Sullivan et al., 2006). Individuals tend to avoid tasks for which they have a low level of self-efficacy, preferring those for which they have a higher level (Sullivan et al., 2006). Self-efficacy correlates with achievement outcomes (Bandura, 1997; Pajares, 1996; Schunk, 1995) and indexes of self-regulation, especially use of effective learning strategies (Schunk & Pajares, 2002). Additionally, students with high self-efficacy for successful problem-solving display greater performance monitoring and persist longer than do students with lower self-efficacy (Bouffard-Bouchard, Parent, & Larivee, 1991).

**Academic self-efficacy.** Bandura and colleagues (2001) further specify *academic self-efficacy* as an individual's conviction they can perform successfully on given tasks at designated levels in regard to learning and mastery of academics. This construct has been examined widely in the literature. According to DeFreitas (2012) self-efficacy influences almost every aspect of academic development, including choice of activities, persistence, and goal development. It is consistently found to be a strong predictor of grades and school persistence, even stronger than measures of ability and intelligence (Weiser & Riggio, 2010). Higher levels of self-efficacy are related to better academic achievement for both African American and European American first year college students (DeFreitas, 2012). This finding supports previous articles indicating that higher levels of academic self-efficacy are directly linked to better grades for college students (Chemers et al., 2001; Choi, 2005; Elias and Loomis 2000; Hackett et al. 1992; Lent et al. 1993) even when ability levels (Kitsantas et al. 2009) and past performance (Elias & MacDonald, 2007) are controlled. Furthermore, a meta-analysis found that academic self-efficacy and college

grade point average (GPA) are related even when controlling for socioeconomic status and high school performance (Robbins et al. 2004). This study supports further research stating academic self-efficacy is positively related to academic performance (Okech & Harrington, 2002).

A key concept in the academic self-efficacy literature is self-regulated learning. Self-regulated learning is defined as the extent to which learners are behaviorally, motivationally, and metacognitively engaged in the learning process (Schunk & Zimmerman, 1994). Literature suggests that self-regulated learners guide their learning process by setting goals, applying appropriate strategies, monitoring their performance, and reflecting on their performance (Zimmerman, 2002). Essentially, self-regulated learning is cyclical and evaluative, each performance of a task provides feedback for future strategies and tasks. Students' beliefs about their self-regulatory skills and strategies play an essential role to this process. These beliefs are known as self-efficacy for self-regulated learning (Gredler & Schwartz, 1997). Their perception of how well they can execute self-regulatory strategies is an important component of self-efficacy for self-regulatory learning (Gredler & Schwartz, 1997). Literature indicates that self-regulation of one's activities is a key characteristic in high academic achievers compared to low academic achievers (Gredler & Schwartz, 1997). Additionally, self-regulated learners demonstrate high efficacy in their abilities, which influences the goals they set for themselves and their commitment to fulfill these goals and/or challenges (Zimmerman, 1989, 1990b). Self-regulated learning has also been known to support college persistence (Kue, 2010) and is a significant predictor of academic performance (Pintrich & De Groot, 1990).

Some research indicates that students' academic self-efficacy perceptions decline as they advance through school (Pajares & Valiante, 2002). Researchers found that the start of this decline in academic self-efficacy begins during the transition from elementary school to middle

school (Wigfield, Eccles, MacIver, Reuman, & Midgley, 1991). This decline has been attributed to factors such as increased competition, norm-referenced grading, less teacher attention, and stress (Pajares & Valiante, 2002). Schunk (1995) reported three types of interventions (i.e., models, goal setting, and feedback) known to positively influence self-efficacy levels in students. Models refers to an individual observing a competent and successful example of someone getting the information they need in order to succeed (Schunk, 1995). Goal setting refers to directing one's attention, linking success with effort, and sustaining motivation (Schunk, 1995). Feedback is a persuasive source of self-efficacy information (Schunk, 1995). It is valuable when individuals cannot determine progress on their own. Schunk (1995) found the implementation of these interventions to change self-efficacy.

**Black University Students.** When examining academic self-efficacy and outcomes in Black students the literature indicates mixed results. Specifically, research has found Black students tended to demonstrate lower levels of academic achievement (i.e., GPA; Roth & Bobko, 2000) and academic persistence compared to their White peers (Stevens, Liu, & Chen, 2018). Additionally, research has indicated that racial and ethnic minority students tend to have lower levels of academic self-efficacy compared to their White counterparts (Mayo & Christenfeld, 1999; Peguero & Shaffer, 2015). When examining more specific subjects pertaining to academic self-efficacy, racial and ethnic minorities were found to have lower levels of mathematics self-efficacy compared to their White peers (Pajares & Kranzler, 1995). Research has also shown that Black students report lower academic self-efficacy at PWIs compared to Black students at Historically Black Colleges and Universities (HBCUs) (Cokley, 2000).

The literature has indicated that experiences of discrimination among racial and ethnic minority students might serve as a key stressor affecting academic outcomes (Stevens, Liu, &

Chen, 2018). Specifically, minority students who report experiencing discrimination reported it negatively impacted their academic performance (i.e., lower grade on an exam or dropped a course; Stevens, Liu, & Chen, 2018). Furthermore, some minority students have described their experiences with discrimination as stressful and traumatic (Ingram & Wallace, 2019). In a study examining academic achievement and persistence in African American college students, results found that African American women who reported high levels of PTSD symptoms in the first semester of college were associated with an increased likelihood of leaving college prior to the end of their second year of college (Boyraz et al., 2013). Although women in this study did not specify if PTSD symptoms were related to racist experiences, if students are perceiving racism on campus as traumatic and both racism and trauma symptoms are impacting academic outcomes, what does this mean for Black students who may experience race based traumatic stress? Further exploring the impact of race based traumatic stress on academic self-efficacy levels in Black students is warranted.

However, racial and ethnic differences in academic self-efficacy research has not remained consistent throughout the literature. Aronson and Inzlicht (2004) discuss in their research the possibility that academic self-efficacy is unstable for African Americans who experience stereotype vulnerability (i.e., the tendency to expect, perceive, and be influenced by negative stereotypes about one's social category), meaning that Black students who exhibit more stereotype vulnerability are more likely to waiver in academic self-efficacy compared to Black students who do not exhibit stereotype vulnerability (Aronson & Inzlicht, 2004). Their research indicated that without vulnerability to stereotypes, Black and White students do not differ in academic self-efficacy. These differences in levels of academic self-efficacy in Black students, suggest reason to explore what other factors influence academic self-efficacy in Black students.



**The role of racial and ethnic identity.** Racial identity has been defined as “a sense of group or collective identity based on one’s perception that he or she shares a common racial heritage with a particular racial group” (Helms, 1990, p. 3). Similarly, ethnic identity has been defined as the “feeling of belonging to one’s group, a clear understanding of the meaning of one’s membership, positive attitudes towards the group, familiarity with its history and culture, and involvement in its practices” (Phinney et al., 1994, p.169). Both definitions agree on a sense of belonging to or shared heritage with a group. There is a growing body of literature on the relationship of these constructs to other important constructs, like academic achievement. Literature has supported that ethnic identity influences academic self-efficacy levels in college students (Thomas & Wagner, 2013). Specifically, ethnic identity and academic self-efficacy were found to be positively correlated in Black South African college students (Thomas & Wagner, 2013). Self-esteem and self-efficacy in the Black South African sample also indicated a positive correlation. There were no correlations between ethnic identity and academic self-efficacy or self-esteem and academic self-efficacy in the White South African sample (Thomas & Wagner, 2013). This study highlights the impact a positive sense of one’s ethnic identity has on Black students. Similar results were found in African American elementary (Smith et al., 2003) and high school (Saunders et al., 2004) students. Specifically, 4<sup>th</sup> graders with higher racial-ethnic pride had higher academic achievement (i.e., grades and standardized tests) compared to students with a low ethnic-racial pride (Smith et al., 2003). Additionally, high school students with a positive self-perception had stronger intentions to complete the current year of high school (Saunders et al., 2004). Ethnic and racial identity is likely to be included in one’s self perception. A positive racial and ethnic identity may explain some of the variability in

academic self-efficacy levels in Black students. Based on the literature it is evident the impact of having a positive racial-ethnic identity has on students.

**The role of university climate.** Perception of university climate has also been supported in the literature to impact academic self-efficacy in Black students. University climate includes but is not limited to support from faculty and administration, social connectedness, equitable access to resources, and overall quality of campus life. Recent research indicates students with a more negative perception of their environment report lower interest in persistence, causing drop out in college students of color (Rigali-Oiler & Kurpius, 2013). Additionally, students of color are more likely to perceive negative campus, racial, and academic climates than White students (Rodgers and Summers, 2008). Museus, Nichols, and Lambert (2008) found that African American students were the most unsatisfied with their campus climate, followed by Asian and Latino American students. Black students specifically report feeling displacement, disrespect, isolation, and race related stress on campus (Parker et al., 2016; Phillips et al., 2018). This is highly alarming due to research indicating that college students' sense of belonging to their institution is positively associated with their persistence (Hausmann et al., 2007), school adjustment, and academic achievement (Pittman & Richmond, 2007, 2008).

A key component in university climate is faculty support and interactions with students. Specifically, lack of support while on campus, especially from faculty, has been associated with negative self-efficacy outcomes (Hackett & Betz, 1992). Allen (1992) further examined this relationship in African American students. Results found that students who attended PWIs reported less favorable relations with their professors compared to students who attended HBCUs (Allen, 1992). Furthermore, good relations with faculty members emerged as the strongest predictor of academic achievement (Allen, 1992). This finding highlights the

importance of faculty in Black students' academic success. Variability in academic self-efficacy levels in Black students may also be attributed to variability in faculty relationships. If universities are not making active efforts to create inclusive and supportive spaces for students of color to thrive academically then they are likely to see an increase in dropout rates (Rigali-Oiler & Kurpius, 2013).

### **Social Support**

Literature supports that university climate, racist incidents, and racial/ethnic identity all seem to impact academic self-efficacy in Black students. However, some students are not as impacted and their academic self-efficacy levels remain similar to their White peers (Aronson & Inzlicht, 2004). Coping mechanisms these students engage in may serve as a buffer to the negative consequences of these experiences. Seeking social support has been found to be a frequently used coping mechanism after experiencing racism (Brondolo et al., 2009). Sarason et al. (1983) defined *social support* as the presence and/or availability of individuals who express concern, love, and care for an individual and provide coping assistance. Research has indicated that people of color are more likely to seek support from family and friends than a mental health professional (Carter & Forsyth, 2010). Social support as a coping mechanism for racist incidents has been supported heavily in the literature with Black individuals (Kriefer, 1990; Swim et al., 2003, Thompson, 2006; Utsey et al., 2000). When looking at Black college students' utilization of social support, results have also been consistent with findings. Specifically, African American gay and bisexual men reported use of social support as the main coping mechanism for racism and prejudice on campus (Goode-Cross & Tager, 2001). Similarly, African American women report relying on one another when experiencing acts of racism and sexism (Shorter-Gooden,

2004). Social support appears to be a frequently used coping strategy for Black individuals at various ages.

Black people's reliance on social support as a coping strategy is also known in the literature as collective coping (Robinson-Wood, 2009). Collective coping is consistent with Black cultural norms and collectivist culture (Robinson-Wood, 2009). Specifically, the value is placed on the group rather than the individual. Therefore, the advancement of the group as a whole is important, thus encouraging the sharing of one another's burdens. This is seen in Robinson-Wood's (2009) study with African American women. Results indicate that this was the primary coping method when compared to other possible coping in African American college women (Robinson-Wood, 2009). Another cultural factor, mentioned previously, that may influence Black people's tendency to rely on social support as a coping strategy is the historical mistrust of mental health professionals (Santiago et al., 2013) and experiences with racism when receiving healthcare services (Peters, 2006). Additionally, Black individuals have coped with racism by relying on the support of their ministry leaders and church members (Chapman & Steger, 2010). All of these cultural considerations may play a role in Black people's preference to rely on social support as a means to cope with racism.

**The Buffering Effect.** A handful of articles have looked directly at social support as a moderator for racism and negative outcomes (i.e., psychological and physical effects). The literature has yielded mixed results on the buffering effect of social support. Social support as a buffering effect for health-related outcomes has been supported in research examining Black college women. Specifically, women who sought more social support had lower vascular reactivity, which is shown to predict future blood pressure status and to differentiate between hypertension risk status groups (Clark, 2006). Social support as a buffer for psychological

distress tends to demonstrate mixed results. Brondolo et al.'s (2009) review of coping with racism found no social support buffering effect. However, social support in conjunction with cognitive ability was found to buffer against race related stress in Black individuals (Ustey et al., 2006). Spousal support has also shown to have a buffering effect for the effects of racial discriminations on depression for Black men (McNeil et al., 2014). Self-esteem social support (i.e., the presence of others to whom one might compare oneself favorably) was also found to buffer the relationship of race-related stress on self-reported hopelessness (Odafe et al., 2017). The social support buffering effect has also been demonstrated in Mexican American populations (Raffaelli et al., 2013). Despite mixed results, it is clear that there is some buffering occurring in the literature.

**Tailored Social Support.** In order for coping to be effective, those who engage in it should be less likely to experience negative outcomes compared to those who do not. Although research has indicated mixed results about social support as a buffer, a common critique of the literature is the way social support is measured. The majority of studies examining social support as a buffer utilize scales of general social support. However, social support is the most effective when it targets the needs brought on by a stressor (Cutrona & Russell, 1990). Seawell and colleagues (2014) defined *tailored social support* as “support that directly addresses racial discrimination”. When considering this, research has demonstrated a buffering effect for social support after experiencing racism (Seawell et al., 2014). Social support that targeted the racial stressor was found to be more effective with African American women than general social support. Additionally, it was shown to be associated with fewer depressive symptoms (Seawell et al., 2014). Based on this finding and previous discrepancies in the literature, tailored social

support may be what is missing to effectively cope with the negative consequences of racist incidents.

**Academic Self Efficacy.** Social support has also been associated with positive effects on academic self-efficacy in college students (Boland, Entezari, & Saadat, 2017). For example, family perceived social support has a positive and significant correlation with self-efficacy (Boland, Entezari, & Saadat, 2017). Additionally, lack of faculty support and encouragement may negatively impact self-efficacy. Hackett and Betz (1992) found that more faculty encouragement and support was significantly predictive of academic milestones self-efficacy (Hackett & Betz, 1992). As mentioned above, verbal persuasion is one of the four categories of experiences that attribute to the development of academic self-efficacy. Consistent with Bandura's conceptualization, these findings further solidify Bandura's theory. Similar results are also seen in high school Latinx students. Students whose parents report home-based parental involvement are shown to have a positive association on their children's attitudes and beliefs about school (Mena, 2001). These positive beliefs strengthen students' intentions to persevere academically (Mena, 2001). Specifically, scales measuring home-based parental involvement included support and scales measuring beliefs about school included academic self-efficacy (Mena, 2001). Based on studies, faculty and family support seem to be an important factor in academic perseverance.

## **The Current Study**

It is clear there is still a lot to explore in regard to race based traumatic stress, social support, and academic self-efficacy. An extensive literature review found no studies to date have examined tailored social support as a moderating variable between race based traumatic stress and academic self-efficacy. In addition, no studies were found on the impact of race based traumatic stress on Black university students' academic self-efficacy levels. This study expands upon the race based traumatic stress literature by examining this relationship, specifically with regard to how tailored social support may buffer a negative relationship between race based traumatic stress symptoms and academic self-efficacy in Black university students. Results will not only inform treatment with this population, but also provide educational systems with valuable information about the experiences of their students.

## **Utility of Current Study**

Given the large body of research on the potential detrimental effects of racism (Carter et al., 2017; Franklin-Jackson & Carter, 2007; Pieterse et al., 2012), it is important to continue to explore the ways racism impacts people of color. More specifically, examining race as a form of trauma in Black university students will provide invaluable information to practitioners and university administrators. Psychologists who follow a scientist practitioner model will be able to integrate these findings into their work with Black clients. Furthermore, findings may support previous literature (Bryant-Davis, 2007; Carter, 2007) indicating the need to recognize race based traumatic stress as a diagnosis or z code in the *Diagnostic and Statistical Manual of Mental Disorders* (APA, 2013). This recognition may aide practitioners in proper diagnosis and treatment of clients of color who struggle with this experience. Building on the race based traumatic stress literature may also aide university administrators in retaining Black students.

Black students tend to have lower completion rates and higher dropout rates in college (Shapiro et al., 2017). They also indicate more dissatisfaction with their university climate (Rodgers and Summers, 2008) and report experiencing frequent microaggressions on campus (Phillips, 2018; Sellers & Shelton, 2003). University administrators could implement programs and outreach efforts to retain their Black students based on the study's findings and previous race based traumatic stress research (Carter, 2007).



## Hypotheses

1. After controlling for classification in college (i.e., undergraduate versus graduate/professional student), higher symptoms of race based traumatic stress will predict lower academic self-efficacy in Black students.
2. After considering the control variable and race based traumatic stress symptoms, general social support and tailored social support will uniquely and positively predict academic self-efficacy in Black students.
3. Tailored social support will moderate the relationship between race based traumatic stress and academic self-efficacy.
  - a. Among individuals with low levels of tailored social support, there will be a significant and negative relationship between symptoms of race based traumatic stress and academic self-efficacy.
  - b. Among individuals with high levels of tailored social support, there will be a less negative relationship between symptoms of race based traumatic stress and academic self-efficacy.

### **III.Method**

#### **Sample**

Participants for this research were currently enrolled undergraduates, graduates, and professional level students, who self-identified as Black or African American, and currently attend a PWI. All participants indicated they were 18 years or older, attended their university for at least one full semester, and could recall a memorable event of racism during their time on campus. In order to obtain an acceptable effect size of .09 (a small effect size =.02-.14), a G\*Power 3.1.5 analysis was used to determine sample size for this study. The result indicated that a total of 90 participants were required to have adequate power (.80) to demonstrate statistical significance (alpha = .05).

Three different data collection methods (further described below) were implemented for this study. In the first method, 214 participants started the study, 55 participants did not meet eligibility criteria, 44 participants missed one of the four attention checks, 33 participants did not list a racist event, and 28 participants did not complete the study in its entirety. In the second method, 66 participants started the study, 7 participants did not meet eligibility criteria, 12 participants missed one of the four attention checks, 18 participants did not list a racist event, and 12 participants did not complete the study in its entirety. In part one of the third method, 637 participants started the study, 463 participants did not meet eligibility criteria, and 22 participants did not complete the study in its entirety. 152 participants were eligible to take part two of the third method collection. In part two of the third method, 137 participants started the study, 9 participants did not meet eligibility criteria, 40 participants missed one of the four attention checks, 7 participants did not list a racist event, and 13 participants did not complete the study in its entirety. After removing participants for the above reasons 134 participants remained.

Participants were further removed for not meeting criteria for race based traumatic stress as outlined by Carlson (1997): for traumatic stress to be present, one must perceive the incident as negative, sudden, and uncontrollable. Of the 134 participants, 8 did not perceive their incident as negative, 20 did not perceive their incident as sudden, 2 did not perceive their incident as uncontrollable, 1 did not perceive their incident as negative or uncontrollable, 1 did not perceive their incident as negative or sudden, and 3 did not perceive their incident as sudden or uncontrollable. These participants were removed from the data set, leaving 99 participants as the final sample for this study.

Of the final participant sample ( $N = 99$ ) for the study, participants were predominantly female (67.9%) and heterosexual (72.7%). The final sample identified as Black or African American (88.9%) or multiracial (i.e. Black and another race(s); 11.1%). Ages for the final sample ranged from 18 to 53 years old ( $M = 24.29$ ,  $SD = 6.39$ ). The majority of the final sample was made up of undergraduate students (62.6%) followed by graduate and professional students (37.4%).

## **Procedures**

Participants were recruited through three different mediums. Initially, recruitment began solely at a large southeastern university. Students who indicated on university records that they identify as Black or African American received an email from the university's Office of Institutional Research inviting them to participate in the study. Students were able to access the survey online through Qualtrics. Surveys were anonymous and students were informed they could end at any time. Upon completion of the survey, participants were able to enter their email address for a chance to win one of several \$50 Amazon gift cards (one gift card was given for every 10 valid responses). Due to low response rates, the survey was broadened to recruit Black

students at any PWI in the United States. Recruitment for this expansion was through email from university diversity officers, directors of multicultural centers, historically Black campus organizations, and listservs. Students in this pool were able to anonymously access a copy of the same survey online through Qualtrics and informed they could end at any time as well.

Participants were also able to enter their email address for a chance to win one of the twenty \$50 Amazon gift cards upon completion of the study. In an effort to reach as many participants as possible, the survey was concurrently placed on Prolific, an online platform used to find appropriate participants for researchers. On Prolific, the survey was split into two parts. The first part consisted of eligibility questions (i.e., age, race, type of institution, length of time at institution, and ability to recall a racist event). Prolific participants who completed part one of the survey were compensated \$0.18 for their time. Prolific participants who met criteria for the study were then eligible to take part two of the survey. The second part consisted of the remaining five measures. Participants who completed part two of the survey were compensated \$3.25 for their time. Prolific participants were not eligible to enter for a chance to win one of the twenty \$50 Amazon gift cards.

All surveys included a unique information letter, informing participants that their participation is voluntary, anonymous, and can end at any time. Participants were able to indicate their consent to participate by clicking an arrow to confirm they read the information letter and voluntarily wished to participate in the study, before accessing the rest of the survey. Participants were then directed to answer demographic questions. Next, participants completed four measures, which asked a variety of questions relating to the participants' thoughts and emotions about a memorable encounter with racism, academic self-efficacy, and social support. These measures appeared in a randomized order to minimize potential item order effects. There were

four attention checks throughout the measures and only those who had zero missed attention checks were included in the final sample. After completing the measures, participants were thanked for their time and provided with mental health resources should they need more support after participating in the study. This page also included contact information for the primary investigator, faculty research adviser, and the Institutional Review Board should the participant have further questions. It was anticipated that the entire survey would take no more than 30 minutes for participants to complete.

## **Measures**

**Demographic Questionnaire.** A demographic questionnaire (Appendix A) was used to gather information about age, race, ethnicity, country of origin, religious affiliation, socioeconomic status, sexual orientation, classification in college/higher education, and learning disability. Those not recruited through Auburn University were also asked to indicate the name of their institution and/or their Prolific ID number.

**Race Based Traumatic Stress.** The Race Based Traumatic Stress Symptom Scale (RBTSSS; Carter et al., 2013) was used to assess symptoms of race based traumatic stress. The RBTSSS contains 52-items examining seven components of race based traumatic stress: depression, intrusion, anger, hypervigilance, physical reactions, low self-esteem, and avoidance. The scale begins with an open-ended question in which participants describe three of their most memorable events of racism in their lives. They are then instructed to select the most memorable event out of the three and indicate (yes–no format) whether the memorable event was negative (i.e., emotionally painful), out of their control, and sudden. Still using the memorable event, participants are asked questions about their emotional and physiological response to the event using a 5-point Likert scale (0 – does not describe my reaction, 1- infrequent, 2- sometimes, 3-

frequently, 4 - this reaction would not go away) to describe how frequently each symptom or reaction occurred within one month after the event and more recently or now when thinking about the event. After each question, participants are asked (yes-no format) if anyone noticed a change in their behaviors or personalities as a result of the reaction. The RBTSSS has received a Cronbach's alpha coefficient of .98 for the total scale (Jordan, 2017).

Based on a literature review, the RBTSSS is the only scale to date that assesses race based traumatic stress in minority populations. Although fairly new, the RBTSS subscales are positively correlated with mental health symptoms (i.e. Mental Health Inventory (MHI-38; Veit & Ware, 1983)) supporting convergent validity (Carter & Muchow, 2017). Confirmatory Factor Analysis (CFA) confirmed distinct subscales that represent symptom clusters associated with trauma (Carter & Muchow, 2017). Predictive validity was also supported in RBTSS subscales. The scales predicted psychological outcomes, including anxiety, depression, and loss of emotional and behavioral control (Carter et al., 2018). Strong reliability was also found when testing the scale on Black adults (Carter et al., 2018). Specifically, Cronbach's alphas for the seven reaction scales were as follows: Depression (.90), Intrusion (.88), Anger (.88), Hypervigilance (.89), Physical Reactions (.91), Low Self-Esteem (.86), and Avoidance (.84; Carter et al., 2018).

Due to the current study's emphasis on racist incidents while in college/higher education, the introductory question and instructions were altered slightly. With permission from the scale developer, the altered version (Appendix B) changed the first question to "Please list and briefly describe the most memorable event of racism you have experienced during your time on campus or at a university related event, the setting where the event occurred (e.g., class, conference, library, football game), the location of where the event(s) occurred (e.g., city, state, or country),

and when in your life the event took place (e.g., adolescence, adulthood, later adulthood).”

Additionally, participants were only asked about their reactions within one month after the event and were not asked about recent reactions or if others noticed behavioral changes. All other questions were kept the same as the initial scale. The total scale score was calculated with possible range of scores between 0-208. Subscale scores were also calculated and possible range of scores were as followed: depression (0-40), intrusion (0-32), anger (0-32), hypervigilance (0-32), physical (0-32), self-esteem (0-24), and avoidance (0-16). The Cronbach’s alpha reliability estimates for the total scale in this sample was .96. The Cronbach’s alpha reliability estimates for the subscale scores in this sample were as followed: depression (.90), intrusion (.83), anger (.87), hypervigilance (.88), physical (.89), self-esteem (.85), and avoidance (.50).

**Academic Self Efficacy.** The Self-Efficacy and Study Skills Questionnaire (SESS) was developed by Gredler and Garavalia (1997; found in *Self-Directed Behavior*, 2002, Watson & Tharp, pp. 50-52) and used to measure academic self-efficacy in this study. The questionnaire consists of 32 items that measure self-efficacy for self-regulated learning and study skills. Only items measuring self-efficacy for self-regulated learning were used for this study. Therefore, participants answered 12 of the 32 questions in the questionnaire. Participants responded by indicating how well they perform various academic-related tasks using a 5-point Likert scale from 1 (not at all well) to 5 (very well). Good reliability was supported when using the SESS with college populations. Specifically, the scale has received a Cronbach’s alpha of .80 (Turner, Chandler, & Heffer, 2009). Additionally, the subscale used in the current study (self-efficacy for self-regulated learning) received a coefficient of .87 (Zimmerman, Bandura, & Martinez-Pons, 1992), indicating good reliability. Construct and concurrent validity was also supported by examining the relationship between scores on the self-efficacy for self-regulated learning scale

and scores assessing other motivation and achievement constructs often used in academic research (i.e. self-efficacy, self-concept, anxiety, task goal orientation, and grade point average (Usher & Pajares, 2008). The Cronbach's alpha reliability estimate for the scale in this sample was .94.

**General Social Support.** The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to assess general social support in this study. The MSPSS contains twelve items related to participants' perception of social support adequacy from their family, friends, and significant other. Participants were asked to rate how they feel about each question on a 7-point Likert scale from 1 (very strongly disagree) to 7 (very strongly agree). The MSPSS has been used widely with university students (Canty-Mitchell & Zimet, 2000). In a predominately African American sample, the MSPSS received a Cronbach's alpha of .93 supporting strong internal reliability. Additionally, strong factorial validity was supported, confirming the three-subscale (i.e. family, friends, significant other) structure of the MSPSS (Zimet et al., 1990). Total scale score was calculated with possible range of scores between 12-84. The Cronbach's alpha reliability estimate for the scale in this sample was .95.

**Tailored Social Support.** The Social Support Questionnaire for Racial Situations (SSQ-RS; Boyce, 1996) was used to assess tailored social support. The SSQ-RS contains five items related to participant satisfaction with support provided by their social network about experiences of racial discrimination. Each question has two parts, the first part asks participants to list the individuals in their social network who they can count on for support in the event described (i.e. "With whom can you count on to help you feel better after you have experienced a racial incident?"). The second part asks the participant to rate on a 6-point Likert scale how satisfied they are with the support they have. The scale is scored by summing responses to the



items. Higher scores indicate greater social support. The SSQ-RS was developed specifically for use among Black individuals and correlates highly with other social support measures, like the Brief Social Support Questionnaire (SSQ6; Boyce, 1996). SSQ-RS received a Cronbach's alpha of .88, indicating acceptable internal reliability (Boyce, 1996).

A previously adapted version of the SSQ-RS was used for this study. The adapted scale (Yang, 2014) contains five items assessing perceived availability of support when experiencing race related stress (i.e. "There is someone I can really count on to help me deal with a racial incident") on a 4-point Likert scale ranging from strongly agree (1) to strongly disagree (4). The scale is scored by summing responses to the items. The adapted scale received a Cronbach's alpha of .93 in African American female populations (Yang, 2014), indicating strong reliability. Concurrent validity was also supported in SSQ-RS when compared to SSQ6 scores (Boyce, 1996). The total scale score was calculated with possible range of scores between 5-20. In this study, scores were reversed coded so that higher scores indicated greater tailored social support. The Cronbach's alpha reliability estimate for the scale in this sample was .96.

## IV. Results

### Bivariate Correlation Analysis

As shown in Table 1, Pearson correlations were conducted to determine the relationships among study variables. Results found significant and positive correlation between general social support and academic self-efficacy. A significant, negative correlation was found between race based traumatic stress and general social support. Additionally, a significant, positive correlation was found between both social support scales.

Table 1

*Pearson Correlation Coefficients among Scales*

Scale	<i>M</i>	<i>SD</i>	1	2	3	4
1. Race based traumatic stress	50.78	34.26	--	-.170	-.200*	.011
2. Academic self-efficacy	43.24	11.37		--	.383**	.358
3. General social support	64.40	16.70			--	.433**
4. Tailored social support	16.07	4.33				--

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Pearson correlations were also conducted to determine the relationship between the race based traumatic stress symptoms subscales in Table 2. Numerous significant results were found between subscales. Specifically, all subscales were found to significantly and positively correlate with one another. Additionally, academic self-efficacy was found to significantly and negatively correlate with anger and self-esteem subscales. General social support had a significant negative correlation with depression, self-esteem, and avoidance subscales. There was a significant

positive correlation between academic self-efficacy and general social support. Lastly, there was a significant positive correlation between general social support and tailored social support.

Table 2

*Pearson Correlation Coefficients among Subscales*

Scale	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Depression	8.80	8.02	--	.547**	.545**	.658**	.678**	.688**	.588**	-.186	-.264**	-.060
2. Intrusion	12.20	6.98		--	.539**	.676**	.550**	.410**	.436**	.007	-.061	.081
3. Anger	10.00	6.65			--	.627**	.575**	.428**	.332**	-.215*	-.114	.181
4. Hypervigilance	7.07	6.83				--	.780**	.561**	.553**	-.124	-.077	.025
5. Physical reactions	6.27	6.64					--	.584**	.448**	-.132	-.133	-.032
6. Self-esteem	4.45	5.13						--	.521**	-.198*	-.323**	-.131
7. Avoidance	1.96	2.3							--	-.092	-.212*	-.097
8. Academic self-efficacy	43.24	11.37								--	.383**	.093
9. General social support	64.40	16.70									--	.433**
10. Tailored social support	16.07	4.33										--

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

### **One-Way ANOVA Analysis**

A one-way ANOVA was used to examine academic self-efficacy mean differences across each group based on how participants were recruited (i.e., via the university's Office of Institutional Research, emailing all PWIs, or Prolific). Results found no significant differences between samples:  $F(2, 96) = .39, p = .68$ . Therefore, participants from all data collection methods were analyzed together.

### **Hierarchical Multiple Regression Analysis**

To determine the extent to which race based traumatic stress symptoms and tailored social support served as predictors of academic self-efficacy, a hierarchical multiple regression analysis was conducted. Initially, two control variables (i.e., learning disability and classification in college) were identified. After conducting an Independent Samples Test results indicated that learning disability did not have a significant impact on academic self-efficacy. Because of the non-significant difference and because only 5 participants in the final sample reported a learning disability, that variable was not included as a control variable. However, classification in college was controlled for in this study. Results found that graduate students reported higher academic self-efficacy scores compared to undergraduate students in this study.

Before running the regression analyses, each predictor variable (i.e. race based traumatic stress, general social support, and tailored social support) was standardized with  $z$  scores. Classification in college was coded into two categories: undergraduate students vs graduate and professional students. Additionally, the regression residuals for skewness and kurtosis were examined in SPSS to ensure normality, using an alpha level of .05 ( $z = +/-1.96$ ). The residuals were within the normal range for skewness ( $z = -1.80$ ) and kurtosis ( $z = -.641$ ) and thus, no transformations of the data were necessary to conduct the regression.

Classification in college was entered at Step 1, explaining 6.4% of the variance in academic self-efficacy. Having graduate or professional student status predicted higher academic self-efficacy (compared to undergraduate students,  $\beta = .25, p = .011$ ). Race based traumatic stress was entered at Step 2 and did not significantly increase variance explained in academic self-efficacy,  $\Delta R^2 = .020, F$  change (1,96) = 2.11,  $p = .15$ . General and tailored social support were entered at Step 3, explaining an additional 11% of the variance,  $\Delta R^2 = .108, F$  change (2, 94) = 6.29,  $p = .003$ . Classification in college remained a significant predictor. General social support ( $\beta = .37, p = .001$ ) was also a significant predictor of academic self-efficacy in Step 3, but tailored social support was not.

After entry of the interaction (race based traumatic stress symptoms and tailored social support) at Step 4, the total variance explained by the model as a whole was 19.3%,  $F(5,93) = 4.45, p = .001$ . The interaction did not significantly increase variance explained in academic self-efficacy,  $\Delta R^2 = .001, F$  change (1, 93) = .09,  $p = .77$ . In the final model, only general social support was statistically significant, ( $\beta = .37, p = .001$ ).

Table 3

*Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Academic Self-Efficacy (N=99)*

Predictor	Academic Self-Efficacy											
	Model 1			Model 2			Model 3			Model 4		
	<i>B</i>	<i>SEB</i>	$\beta$	<i>B</i>	<i>SEB</i>	$\beta$	<i>B</i>	<i>SEB</i>	$\beta$	<i>B</i>	<i>SEB</i>	$\beta$
Classification in college	5.92	2.30	.25*	5.53	2.30	.24*	4.27	2.22	.18	4.24	2.23	.18
Race based traumatic stress				-1.62	1.12	-.14	-.84	1.09	-.07	-.89	1.10	-.08
General social support				4.21	1.21	.37**	4.21	1.22	.37**	4.21	1.22	.37**
Tailored social support				-.99	1.18	-.09	-1.02	1.19	-.09	-1.02	1.19	-.09
Interaction (Tailored social support x race based traumatic stress)										-.29	.97	-.03
<b>R<sup>2</sup></b>	.06				.08			.19			.19	
$\Delta R^2$	.06				.02			.11			.00	
<b>F change</b>	6.65				2.11			6.29			.09	

\*\* $p < .01$ .

\* $p < .05$ .

Because there were significant bivariate correlations between race based traumatic stress subscales and academic self-efficacy, an exploratory hierarchical regression analysis was conducted with subscale predictors. As entered before, classification in college was entered at Step 1, explaining 6.4% of the variance in academic self-efficacy in this model. Each individual race based traumatic stress subscale (i.e., depression, intrusion, anger, hypervigilance, physical reactions, low self-esteem, and avoidance) was entered at Step 2, and none of the individual scales significantly increased variance explained in academic self-efficacy,  $\Delta R^2 = .07$ ,  $F$  change (7,90) = 1.02,  $p = .42$ . General and tailored social support was entered at Step 3, explaining an additional 9.3% of the variance,  $\Delta R^2 = .093$ ,  $F$  change (2, 88) = 5.31,  $p = .007$ . The total variance explained by the model as a whole was 22.6%,  $F(10,88) = 2.57$ ,  $p = .009$ . In the final model, consistent with previous results, only general social support was statistically significant, ( $\beta = .35$ ,  $p = .002$ ). Due to a lack of significance found between academic self-efficacy and the race based traumatic stress symptom subscales, an interaction effect was not explored.



Table 4

*Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Academic Self-Efficacy (N=99)*

Predictor	Academic Self-Efficacy								
	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Classification in college	5.92	2.30	.25*	4.64	2.41	.20	3.49	2.33	.15
Depression				-1.36	1.90	-.12	-.72	1.83	-.06
Intrusion				2.16	1.60	.19	2.15	1.53	.19
Anger				-2.57	1.51	-.23	-2.21	1.50	-.20
Hypervigilance				-.05	2.18	-.00	-1.09	2.11	-.10
Physical reactions				.74	1.95	.07	.58	1.87	.05
Self-esteem				-1.01	1.63	-.09	-.04	1.59	-.00
Avoidance				-.09	1.48	-.01	.35	1.42	.03
General social support							4.03	1.28	.35***
Tailored social support							-.62	1.24	-.06
R <sup>2</sup>		.06			.13			.23	
$\Delta R^2$		.06			.07			.09	
<i>F</i> change		6.65			1.02			5.31	

\*\*\* $p < .01$ .

\* $p < .05$ .

## V. Discussion

When examining the previously proposed hypotheses for the present study, mixed results emerged. Hypothesis one was not supported in the current study. Specifically, after controlling for classification in college, race based traumatic stress symptoms did not significantly predict lower academic self-efficacy in Black students. These results differ from previous literature indicating the significant negative impacts of racism on academic performance (Stevens, Liu, & Chen, 2018). In their study, researchers explicitly asked participants if their academic performance was impacted as a result of discrimination within the last 12 months. However, discrimination was not actually measured in Stevens et al.'s (2018) study. The scale used in the current study to explore race based traumatic stress is likely to differ from other scales examining racism and discrimination in Black people. The scale's emphasis on trauma reactions may have presented unique results not consistent with previous literature. Additionally, time may also play a key role in understanding the results of this study. In this study, the race based traumatic stress symptoms scale focused on participants' reactions one month after their racist incident. Depending on how long ago their incident occurred, participants may have had new experiences that shaped their academic self-efficacy. Although, the participants confirmed the incident took place during college, the unknown amount of time that passed is one potential explanation for the non-significant results.

After considering classification in college and race based traumatic stress symptoms, general social support significantly and positively predicted academic self-efficacy in Black students. This finding is important because academic self-efficacy is consistently found to be a strong predictor of grades and school persistence (Weiser & Riggio, 2010). Higher levels of academic self-efficacy are also directly linked to better grades for college students (Chemers et

al., 2001; Choi, 2005; Elias and Loomis 2000; Hackett et al. 1992; Lent et al. 1993).

Furthermore, higher levels of academic self-efficacy are related to better academic achievement for African American first year college students (DeFreitas, 2012). Tailored social support was not a unique predictor after accounting for general support. Thus, hypothesis two was only partially supported. These results differ from previous literature indicating social support that targets the racial stressor is more effective than general social support (Seawell et al., 2014). This may be attributed to the scales' assessment of symptoms and time. Specifically, the RBTSSS measured trauma symptoms occurring within one month of the event. However, tailored social support was measured based on participants feelings in the moment. Results may have looked different if participants reported on symptoms and support in the same time frame. In addition, longitudinal research would help to better understand the impact of tailored social support following a racist incident. Despite the discrepancy with some previous research, prior research shows that general social support after a racist incident is still utilized heavily amongst Black people (Kriefer, 1990; Swim et al., 2003, Thompson, 2006; Utsey et al., 2000) and appears to have positive impacts on academic outcomes in Black students like the current study and other previous literature (Boland, Entezari, & Saadat, 2017).

Finally, hypothesis three was not supported. Tailored social support did not moderate the relationship between race based traumatic stress symptoms and academic self-efficacy. Because the majority of hypotheses were not supported, it is important to consider the mean scores for each scale compared to the possible ranges. Specifically, the race based traumatic stress symptoms scale had a potential range of 0-208 and an average score of 50.78 in this study. Prior studies utilizing the RBTSSS with people of color demonstrate similar results. For example, the majority of participants (106 out of 192) indicated low race based traumatic stress in Carter et

al.'s (2017) study. Low race based traumatic stress was defined as scoring, on each subscale, at least one half a standard deviation below the sample mean. Carter and Sant-Barket (2015) utilized the RBTSSS and 155 out of 253 participants did not demonstrate elevated scores on any of the RBTSS subscales. An elevated score was defined as a standardized scale score at least one standard deviation above the mean. Additionally, the academic self-efficacy scale had a possible range of 12-60 with an average score of 43.24 in this study. This finding suggests that academic self-efficacy in this sample was relatively high. Therefore, it is reasonable to expect that race based traumatic stress would not have a significant impact on academic self-efficacy in this sample due to the low race based traumatic stress scores. Furthermore, general social support ( $M= 64.40$ ) and tailored social support ( $M= 16.07$ ) received relatively high mean scores compared to their possible range of scores respectively, (12-84; 5-20). 74.6% of participants scored a 15 or above on the tailored social support scale. However, despite some potential restriction of range, examination of the standardized regression residuals did not suggest problems of significant skewness or kurtosis, limiting concerns about possible violation of regression statistical assumptions.

Additionally, when thinking about the experiences of Black students and interpreting the results of the current study, it is also helpful to think about the impact of resilience. Research supports the possibility that resilience relates to components that allow students to achieve and persevere toward degree completion (Bryan, 2005; Kim & Hargrove, 2013). Resilience is also positively associated with perceived social support (Brown, 2008). Participants in the current study indicated high social support. Based on the literature, participants in this sample may have also indicated high resiliency, protecting against low academic self-efficacy scores. Research also supports resilience serving as a protective factor among Black women at risk for depression

or PTSD (Holden et al., 2016). Evaluating resilience in the current study may have explained the low scores on the race based traumatic stress symptom scale. Further exploring this variable among Black university students may further add to the research on racial trauma and academic self-efficacy.

## **Implications**

The results of the current study present several implications. The study further solidified previous research indicating the importance of social support among Black students. Prior research has found that Black students experience a higher amount of racism on campus compared to their peers (Contrada et al., 2001) and tend to rely heavily on social support after experiencing a racist event (Kriefer, 1990; Swim et al., 2003, Thompson, 2006; Utsey et al., 2000). Consistent with current findings, increased social support has a positive impact on academic self-efficacy in Black students. Students who report high family (Boland, Entezari, & Saadat, 2017) and faculty (Hackett and Betz, 1992) support during college have higher academic self-efficacy. It is clear that social support serves as a helpful coping mechanism while enrolled in college. Thus, students who come to their university counseling center for therapy regarding race related stress on campus may benefit from psychoeducation on effective coping and advocating for their needs from their social support systems. Furthermore, connecting students with appropriate resources on campus to increase their sense of community and connection to the university may strengthen their sense of support on campus and perseverance to graduate. Students who utilize resources on campus are likely to feel more connected and persist in college (Boyratz et al., 2013). Black students may also present to the counseling center with symptoms of trauma after a racist incident. It is imperative for clinicians to understand the importance of trauma informed care and provide culturally informed therapy. Culturally adapted

psychotherapies tend to have better outcomes compared to other therapies or control groups (Hall et al., 2016).

It is also important to consider that all participants in this study identified a racist incident that was perceived as unexpected, negative, and out of their control. Despite this, results indicated low race based traumatic stress scores. There are likely other effects of those racist incidents that were not covered in the current study. Specifically, the literature has indicated that Black university students who indicate high levels of racism also report higher than average levels of binge drinking (Metzger, 2017), sleep problems (Fuller-Rowell et al., 2020), symptoms of anxiety and the internalization of negative stereotypes (Sosoo, Bernard, & Neblett, 2019). Therefore, students may not be reporting high levels of traumatic stress due to racist events but are likely to benefit from support and outreach in other areas. Furthermore, all participants in the final sample were able to identify a racist incident while in college. Universities should prioritize efforts to improve campus climate for students of color on campus.

### **Limitations and Future Research**

There are limitations that are notable to mention when examining this study. Specifically, this was a cross sectional study. A longitudinal approach to this study would allow academic self-efficacy to be measured last as a true outcome of race based traumatic stress and social support. Additionally, the study was highly homogenous in gender and sexuality. The majority of participants identified as heterosexual women. It is possible that the experiences of this sample may not be generalizable to other gender identities and sexual orientations. Expanding this research to include other diverse identities would expound upon the racial trauma literature. Furthermore, participants were only recruited from PWIs in the United States. Literature has indicated that Black students have different experiences at PWIs vs HBCUs (Allen, 1992).

Therefore, results may not be generalizable to other Black students who attend HBCUs. Research has also indicated non-Black students of color also encounter frequent racism on campus (Ingram & Wallace, 2019). Using the race based traumatic stress symptoms scale with other populations may aide researchers in further understanding this construct and how it manifests in other people of color. There were also some alterations made to the race based traumatic stress scale. Specifically, students were asked to identify a racist incident that occurred during their time in higher education. Participants may have had other memorable events with racism outside of school that impacted them more than the one they selected due to this change. Additionally, there was limited consistency in the number of items for each subscale. Avoidance had the lowest number of items (4) and lowest Cronbach's alpha (.50). The subscales were utilized only for an exploratory analysis, but the results related to Avoidance should be interpreted with caution due to that subscale's low reliability. Furthermore, the overall study was relatively long including a demographic questionnaire, a short response section, and 81 items across scales. It is possible that the length of the study contributed to the high dropout rate. Specifically, the race based traumatic stress measure was the longest scale containing a short answer section and 52 items. Developing a revised shorter version of the scale may assist with dropout rates. Lastly, examining racial trauma symptoms over time instead of at one point, like in the current study, may present different results as well.

Additional directions for future research, include examining the possible impacts of ethnic identity on academic self-efficacy in university students. Previous research has indicated the benefits of a positive perception of one's ethnic identity. Specifically, ethnic identity and academic self-efficacy were found to be positively correlated in Black university students (Thomas & Wagner, 2013). Perceived ethnic identity may have explained some of the variance

in academic self-efficacy in the current study. Exploring this variable's impact may also add to the racial trauma literature. Furthermore, the extent to which people of color identify with their race may be a contributing variable to explore. This was something not examined in the current study. Previous research has supported the impacts of racism differ based on the extent to which someone identifies with their race (Forsyth & Carter, 2012), similar outcomes may arise when exploring racial trauma in communities of color.

## **Conclusion**

In summary, the findings from this study suggest that general social support significantly and positively predicts academic self-efficacy in Black students after controlling for race based traumatic stress symptoms, tailored social support, and classification in college. Tailored social support was not found to significantly predict academic self-efficacy after controlling for the effect of general social support. Results did not support previous literature on the impact of racism (in the form of race based traumatic stress symptoms) on academic self-efficacy. However, results did support literature indicating positive effects of social support on academic self-efficacy. Clinically, incorporating conversations about social support and advocating for one's needs within their support system may be beneficial in improving students' overall wellness and academic performance. Additionally, all participants in the final sample were able to recall a racist incident while in college. Thus, more efforts to improve campus climate for Black students in college is needed. Ultimately, there is much left to explore when examining the impacts of racial trauma in communities of color. Continuing to develop research on this construct is needed to determine the best way to serve these communities.



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## Appendix A

### Demographic Questionnaire

1. Please enter your age: \_\_\_\_
2. Please indicate your gender (select all that apply):
  - Female
  - Gender non-conforming
  - Gender queer
  - Male
  - Transgender Male
  - Transgender Female
  - Other self-identified gender: \_\_\_\_\_
  - Prefer not to answer
3. Please select your sexual orientation (select all that apply):
  - Asexual
  - Bisexual
  - Gay
  - Heterosexual
  - Lesbian
  - Other self-identified sexual orientation: \_\_\_\_\_
  - Prefer not to answer
4. Please select your current classification:
  - First year
  - Sophomore
  - Junior
  - Senior
  - Master's Level Graduate Student
  - Doctoral Level College Student
  - Professional Student
  - Other: \_\_\_\_\_
5. Please indicate your country of origin: \_\_\_\_\_
6. If born outside of the United States, how many years have you lived here? \_\_\_\_\_
7. Please select your religious affiliation:
  - Agnostic
  - Atheist
  - Buddhist
  - Catholic
  - Christian
  - Hindu
  - Jewish
  - Muslim
  - Other:
8. Please indicate your family's current socioeconomic status
  - Lower Class
  - Working Class

- Lower Middle Class
  - Middle Class
  - Upper Middle Class
  - Upper Class
  - Prefer not to answer
9. Please indicate if you have a learning disability. If yes, please write the specific disability below: \_\_\_\_\_