

12-10-2025

Expressing Diversity and Anxiety Among Graduate Psychology Students

Paola G. Garcia Betancourt
Walden University

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Walden University

College of Allied Health

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Paola Giset Garcia Betancourt

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the review committee have been made.

Review Committee

Dr. Megan Corley, Committee Chairperson, Psychology Faculty
Dr. Lisa Scharff, Committee Member, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2025

Abstract

Expressing Diversity and Anxiety Among Graduate Psychology Students

by

Paola Giset García Betancourt

MA, Walden University, 2020

MA, University of Carlos Albizu, 2016

BA, University of Puerto Rico, 2014

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

November 2025

Abstract

This quantitative study examined the relationship between motivational factors that contribute to challenges in expressing diversity and the levels of anxiety experienced by graduate psychology students when discussing racial topics. The study was grounded in critical race theory, which posits that racism is embedded within social and institutional systems and influences interpersonal and educational dynamics. The purpose of the study was to determine whether motivational factors, as measured by the Color-Blind Racial Attitudes Scale, predicted anxiety levels, as measured by the Patient-Reported Outcomes Measurement Information System Emotional Distress Anxiety Short Form, and whether racial background moderated this relationship. Data were collected from 93 graduate psychology students in the United States who met inclusion criteria of being currently enrolled or recently graduated from a psychology program at the master's or doctoral level. Using a nonexperimental, cross-sectional design, correlation and multiple regression analyses were conducted to examine the association between color-blind racial attitudes and anxiety, and moderation analyses assessed whether race influenced this relationship. Results revealed no significant overall relationship between motivational factors and anxiety; however, among Black-identifying students, higher color-blind racial attitudes were associated with lower anxiety. These findings underscore the complexity of race-related anxiety and indicate that racial identity may shape emotional responses to diversity discussions, highlighting the importance of enhancing diversity education within graduate psychology programs.

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Dedication

I dedicate this dissertation first and foremost to God, thanking Jesus for making all of this possible. God's promises have been my anchor throughout this journey, sustaining me during seasons of uncertainty and guiding me toward each new step. Scriptures such as Romans 8:28, Matthew 6:33, Jeremiah 29:11, and Proverbs 3:5-8 have reminded me to remain steadfast in faith and to trust fully in His plan. I also dedicate this work to my husband and to my family, whose love, sacrifices, and unwavering support have carried me through this journey.

Genesis, you are not here with us because you are running in heaven, but sweet fur baby, God used you in every way possible for me to finish through the darkest times. Noah, my fur baby, even though Genesis is not with us, thank you for being so loving to me and helping me get to the finish line.

“We don't deserve praise! The Lord alone deserves all of the praise, because of his love and faithfulness.” - Psalm 115:1

Acknowledgments

This dissertation is the result of the guidance, support, and encouragement of many people who have been part of my academic and personal journey.

First, To my husband, Javier A. Vázquez, words cannot capture the depth of my gratitude. From our days as friends during my undergraduate years, and way before, through my first master's degree dating, and from the very beginning of my PhD, when we had been married for less than a year, you have been my constant source of strength. Your unwavering support, your reminders of my faith and foundation, and your willingness to take on everything in every aspect of our lives so that I could continue this journey, even while carrying the weight of your own demanding and challenging career, have sustained me. Through every move across countries and state lines, through seasons of sickness, times of limited resources, and every moment in between, you have held my hand with love, provision, and a steadfast spirit guided by God. I could not have done this without you.

I extend my deepest gratitude to my committee chairs, Dr. Megan Corley and Dr. Lisa M. Scharff, whose mentorship, expertise, and patience have shaped both this work and my development as a scholar. Your feedback and consistent communication kept me moving forward even when the process felt extremely challenging and carried me to the finish line.

My journey in psychology began in 9th grade, when the subject first captured my interest, and I am grateful for all the support I received from my earliest years. However, I must primarily thank my parents, Angel García Peña and Yazmín Betancourt

Bermudez. Who I am today did not happen in a void or by chance, it happened first because of God, and then because of my parents, who made sure I had a strong foundation of faith, provided unconditional love, ensured I had an excellent education, instilled discipline, and taught me that it is okay to make mistakes, to start over, to have weaknesses, and to keep going. Thank you for all the sacrifices no one saw, sacrifices I now understand more deeply with time and age. Your belief in me, your presence, and your love made everything possible.

To my father, Angel, papá, thank you for showing me the value of hard work, discipline, resilience and placing God first. Your determination and example have been a constant guide in my life, and for taking the time to always talk with me and better understand what I am going through and the challenges I have faced during this journey. To my mother, Yazmin, mamá, thank you for keeping faith at the center of every decision, for your endless encouragement, your ability to see the best in me even when I could not, and your nurturing spirit that made me feel safe to grow, fall, and rise again. Thank you both for always pushing me and for speaking into my life the living Word of God, reminding me never to give up. To my beloved abuela, Blanca Bermudez Ramos, thank you for helping raise me, for always believing I could achieve anything, for every prayer, and for your hard work at home to make sure I was cared for so I could keep moving forward. To my little brother, Gabriel García Betancourt, thank you for believing in me, for speaking life into me when everything felt dark and for always making me laugh until my stomach hurt. You have all been there from my beginnings, through my undergraduate years, my move to a different country, and all the way to the completion of

a profession that can take more than a decade to achieve. I would also like to recognize my husband's family, Javier Vázquez, Mabely Santiago, and Janhira Vázquez, for their wonderful support, prayers and constant communication throughout this journey, truly, eternally grateful. To my Godparents, Nuria Rivera and Reinaldo Schmidt, thank you for all the love, prayers and support, for giving me the confidence to keep going, and for taking me back and forth to school through many years and different seasons being supportive of my goals. To my complete extended family, thank you for your love and encouragement through all my years of growth and development, standing beside me from childhood to this moment. To my aunts, uncles, cousins, and every family member, thank you for your continued support, encouragement, and love, which have been a steady source of strength throughout my life. I love you all so deeply, thank you.

Moving to Las Vegas marked a new chapter in my life, and little did I know that God had already placed colleagues from my own university there, prepared to walk beside me through the challenges and victories of this process. Jessica, Erica and Tiaira, you have not only been incredible colleagues but also true friends who stood by me through both the good and difficult times. To Jessica Jensen, from day one of practicum and internship, you have been by my side. We have worked together, kept each other accountable, and gone through thick and thin, enduring the challenges and celebrating the milestones of this journey together, growing alongside each other into clinical psychologists. I could not have done this without your friendship and support. To Erica Marino, as a friend, doctoral colleague, and co-worker, you have opened doors for me and offered encouragement throughout my dissertation journey. To Tiaira Green, such a

good friend and doctoral student colleague, thank you for being a voice of reason during the darker moments, for showing grace, and for joining me in long nights of dissertation writing in virtual spaces, and with Erica at libraries and lounges through town. Ladies, I am privileged to call you my colleagues, but I am truly blessed to call you my friends.

I am also profoundly grateful to those who have supported me throughout my professional training. To Dr. Ahmad, Dr. Boyce, and Dr. Nesto, thank you for guiding me through two years of practicum and internship, inspiring me to grow into the professional I am today, and reminding me to keep going when the finish line felt far away, especially doing dissertation at the same time. To Dr. Alandy, your flexibility, understanding, and encouragement during my time working with you have been invaluable in helping me reach my goals and finish my dissertation.

Beyond my academic and professional circles, I have been blessed with friends whose kindness, encouragement, and laughter have sustained me during the most demanding phases of this journey. Your presence has been a reminder that even in the midst of deadlines and long nights, life is meant to be shared and celebrated. I am especially grateful to friends who, even across oceans, remained close in heart and spirit, checking in, encouraging me, and reminding me that I was never alone in this process.

To Kathia Peña, since 3rd grade you have been there for me, through good and not-so-great seasons, and together we have navigated life with our faith as our foundation. Our families made sure that we both had the support needed to reach the finish line, both becoming clinical psychologists. I am so grateful for your guidance through dissertation challenges after completing your own, and for walking alongside me

in this journey. You are my sister from another mother, and I am eternally grateful for everything you have done for me. To Nilka Malavé, you have been one of my best friends since 9th grade, and I am deeply grateful for your support. As fellow professionals in the social sciences world, you, Kathia, and I were able to move forward together from undergraduate days onward. Thank you for always sharing the Word of God with me, and for helping me press on even through dark seasons and hard, challenging days. Your friendship and faith-filled encouragement have been a light along this path. To Nicole Rodríguez, you are my big sister always and forever, always with your best interest in heart and such incomprehensible love of God that you reflect with your words and actions. From bubbles when we were just little girls, neighbors' children playing together, to professionals making a difference within the mental health world, you have been by my side. Thank you, because in all seasons, you have been a moral compass and support. I love you all so much.

To my church family and faith community, thank you for your prayers, encouragement, and for continually reminding me of God's promises during this journey. Throughout the years, from my undergraduate days in Puerto Rico, to South Dakota, and now in Las Vegas, you have all been so supportive, loving, and essential in helping me keep going and keeping God first in my journey.

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Chapter 1: Introduction to the Study

Introduction

The study aimed to explore the extent to which social pressures and inherent challenges in discussing race contributed to heightened anxiety levels among graduate psychology students. Addressing these difficult topics is crucial for future psychologists to foster a more inclusive and empathetic professional community. However, both students and faculty frequently feel constrained and anxious when addressing these subjects, primarily due to the social pressures and potential repercussions within their academic and professional environments (Williams, 2019). Such anxieties inhibit the open and productive discussions essential for personal growth and the advancement of the field.

This research was grounded in critical race theory (CRT), which provides a comprehensive framework for examining the societal and ideological factors that shape interpersonal relationships and professional practices (Delgado et al., 2017). CRT posits that racism is deeply embedded within the fabric of society, influencing various aspects of life, including education and professional development (Delgado et al., 2017). By applying CRT, this study sought to uncover whether there are underlying causes of anxiety related to diversity discussions and propose strategies to help graduate programs support students more effectively. The primary objectives of this study were to identify the specific motivational factors that lead to challenges in discussing diversity, as well as to examine how these factors contributed to varying levels of anxiety among graduate psychology students from different racial backgrounds. By using quantitative methods,

the study analyzed data from graduate psychology students to determine whether significant correlations exist between anxiety levels and specific motivational factors, such as fear of judgment or social repercussions. Ultimately, this research aimed to provide actionable insights for graduate psychology programs, focusing on developing training and support mechanisms that built students' confidence in addressing racial topics without fear of judgment. The implications of this study are substantial, offering the potential to create more inclusive educational environments, while better preparing future psychologists to engage empathetically with diverse populations and fostering a more equitable and socially responsive professional community. In this chapter, I will review the background on the subject of race and anxiety in graduate psychology programs, the problem and purpose of the study, the theoretical framework of CRT, the methodology used to respond to the research questions, definitions of key terms, and limitations of the study.

Background

The field of psychology has historically lacked inclusion, with most research conducted on WEIRD (Western, educated, industrialized, rich, and democratic) populations, which do not adequately represent the diversity of society (Henrich et al., 2010). This over-reliance on WEIRD samples contributes to a perception of whiteness as the neutral standard in psychological research, often marginalizing People of Color and interfering with their psychological processes (Roberts & Mortenson, 2023).

Graduate psychology programs are designed to promote diversity; however, class dialogues often become challenging due to confusion around key concepts such as “safe

space” and “making space,” “safe spaces” and “brave spaces,” and the distinction between “feeling uncomfortable” and “feeling unsafe” (Wright, 2023). “Safe spaces” are environments where individuals feel secure and protected from discrimination or criticism, while “making space” involves actively creating opportunities for marginalized voices to be heard. Understanding these distinctions was vital for fostering productive and inclusive classroom discussions (Wright, 2023).

In their research, Ramírez Stege et al. (2020) discussed two incidents in a clinical setting involving a clinical supervisor and two trainees of color. The supervisor, a cisgender, queer, White counseling psychologist, interacted with the first trainee, a queer, international ciswoman of color, and the second trainee, a ciswoman of Mexican heritage born in the United States. From the interactions, the trainees indicated that the supervisor needed to be more effective in navigating the sociopolitical climate and fostering an authentic supervisory relationship. The authors emphasized the importance of creating safe spaces in supervisory relationships and suggested that future studies identify specific steps that supervisors and trainees could take to achieve this goal (Ramírez Stege et al., 2020).

Color blindness refers to the disregard of racial characteristics and the denial of systemic racism’s impact on individuals of color. This attitude hinders open discussions about race and perpetuates misunderstandings (Neville et al., 2013). The case study by Ramírez Stege et al. (2020) highlighted the need for supervisors to acknowledge and address racial dynamics more explicitly to create a safe and supportive environment. Addressing color blindness was crucial for creating safe spaces where individuals felt

secure and protected from discrimination or criticism. By recognizing and mitigating the factors that contribute to color blindness, supervisors could foster more authentic and effective relationships with their trainees. This approach not only supports the trainees' professional development but also reduces the anxiety associated with discussing race and diversity-related topics (Sue et al., 2007).

Fisher (2020) , cultural humility is essential for psychologists, as it helps practitioners understand how power, privilege, and sociopolitical forces shape interactions with diverse students and families. Trainees of color are at risk of harm when supervisors did not understand the importance of cultural humility in their mentoring. Cultural humility involves continuous self-evaluation and self-critique, recognizing and addressing power imbalances, and fostering respectful partnerships (Abe, 2020). This differs from cultural competence, which focuses on learning about different cultures and applying that knowledge (Tervalon & Murray-García, 1998). Abe (2020) emphasized that cultural humility includes being aware of one's limitations and cultural perspective, which relates to individual traits. While it is crucial to develop a personal commitment to self-reflection to challenge social injustices, it is equally important to consider the broader social context. Paying attention to the collective dimension helps recognize and address the effects of structural forces and social, political, and historical contexts that marginalized and oppressed communities, not just individuals (Abe, 2020).

The concept of racial battle fatigue (RBF), which Wang et al. (2020) discussed, affects trainees of color who push for racial justice, power, oppression, and privilege. People of color experiencing racial battle fatigue exhibit emotional and behavioral

responses such as altered eating habits, smoking, alcohol use, social withdrawal, and decreased academic or work performance, along with psychological reactions like anger, anxiety, disappointment, and disbelief, and physical symptoms including headaches, chest pain, shortness of breath, and insomnia (Quaye, 2020). Racial microaggressions impact their physical, mental, and emotional well-being (Chancellor, 2019).

The perception of diversity also impacts research that examined child and adolescent mental health service professionals' views on training needs when providing mental health services to diverse groups. More than half of the participants associate cultural diversity mainly with ethnic diversity (Dogra & Vostanis, 2007). This environment leads to feelings of isolation and exhaustion among minority students due to underrepresentation and unrecognized diversity-related work (Williams, 2019).

Gushue et al. (2017) explored color-blind racial ideology (CBRI) and examined how various antecedents contribute to the development of color-blind attitudes. Identifying the essential tools for providing multicultural training was crucial; thus, understanding these services was vital for guiding students and faculty in fostering a nonracist identity. The research involved 198 White graduate trainees who were assessed for socially desirable responses devoid of prejudice using the Color-Blind Racial Attitudes Scale (CoBRAS). The researchers highlighted that the "link between denials of racism and the desire to maintain a positive sense of self suggests that the psychosocial cost of acknowledging racial realities may effectively distort one's ability to see reality accurately" (p. 83). They also discussed how anxiety influences behaviors associated with CBRI, leading individuals to minimize these attitudes (Gushue et al., 2017).

The lack of consistent communication regarding the definition of diversity among faculty members, their expressed need for more training to teach diversity-related topics effectively, and the necessity for institutional support, including providing training, preparation time, and resources to help faculty integrate diversity components into their courses, are significant issues (Gordon, 2023). Graduate students often have close relationships with faculty and supervisors, which directly impacts their perception of diversity. In addition, research highlights the importance of examining relationships between White allies and individuals from marginalized racial groups, both within and outside academic contexts, to better understand how allyship can be enacted authentically and accountably (Hinger et al., 2023).

Smith (2017) found that White professors often feel uncomfortable and frightened when having open discussions regarding diversity. This discomfort leads them to present themselves as “the good White person,” which minimizes other White students who may not be as educated on the topic. As a result, these professors often avoid speaking in multiracial conversations, assuming their voices will have substantial influence within the setting. This environment leads to feelings of isolation and exhaustion among minority students due to underrepresentation and unrecognized diversity-related work (Williams, 2019).

Gregus et al. (2020) conducted a mixed-method and cross-sectional study of 397 graduate students within American Psychological Association (APA) programs in the United States. The authors revealed that White students feel the programs provide safe environments, whereas Black students report feeling underrepresented and indicate a

need for diversity in ideas (Wang et al., 2020). Additionally, minority faculty members note that psychology programs often lack education provided by persons of color, promoting underrepresentation and the perception that knowledge is exclusive to White people (Williams, 2019). Recommendations included assessing the multicultural perception of training and climate from all faculty and students (Wang et al., 2020).

The inclusion of the CoBRAS is essential, as it evaluates the unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues (Gushue et al., 2017). These factors are critical in understanding the challenges of expressing diversity and the associated anxiety within graduate psychology programs. The Patient-Reported Outcomes Measurement Information System (PROMIS) Emotional Distress Anxiety Short Form is a widely used clinical interview scale that assesses levels of anxiety. This tool emphasizes the psychological and affective dimensions of anxiety, making it suitable for self-assessment of anxiety-related distress in social and academic contexts (Pilkonis et al., 2011). In a multisite validation study, Schalet et al. (2016) found that the PROMIS Anxiety scale was sensitive to changes in emotional distress across multiple chronic health conditions, demonstrating strong responsiveness and clinical validity. These findings support its reliability as a measure of anxiety symptoms and its applicability in diverse populations. Integrating the PROMIS with CoBRAS allows for a comprehensive examination of how color-blind racial attitudes contribute to anxiety levels among graduate students in psychology programs.

By addressing the gap that evaluates how topics of diversity relate to anxiety within graduate psychology programs, future studies are expected to address this issue

safely within the university environment. Discussions on race and diversity in the curriculum, coupled with cultural humility training, contribute to creating a more inclusive and supportive educational environment, ultimately benefiting the mental health field.

Problem Statement

The lack of diversity within psychology programs shows that conversations about racism, power, oppression, and privilege can lead to color blindness (Wang et al., 2020). The political climate necessitates that the discipline addresses the importance of recognizing how challenges in expressing diversity can lead to harm within graduate programs and subsequently affect clinical and counseling services in the increasingly diverse population (Gushue et al., 2017). As psychologists, ethical requirements within the profession must be upheld. Graduate students often feel that to be seen as good individuals or competent future psychologists, they must deny or avoid racism to alleviate the anxiety associated with the topic (Gushue et al., 2017).

The literature gap indicated a need to understand the specific motivational factors and underlying causes that contribute to challenges in acknowledging and expressing diversity within graduate psychology programs in the United States. Addressing this gap is essential for developing effective strategies to reduce anxiety and enhance the quality of diversity discussions among students. The problem of challenges in expressing diversity and the anxiety associated with discussing racism within graduate psychology programs stems from a lack of understanding of, and engagement with, diversity among future mental health professionals.

This issue is exacerbated by the predominantly homogenous makeup of faculty and students in these programs, which does not reflect the increasing diversity of the general population (Williams, 2019). To train future psychologists properly, it is essential to incorporate conversations about diversity and cultural humility into the curriculum. Cultural humility involves continuous self-reflection and learning about different cultural perspectives, which are necessary for fostering an inclusive and empathetic professional community (Tervalon & Murray-García, 1998). However, these discussions often lead to anxiety among students and faculty as they navigate the social pressures and potential repercussions within their academic and professional environments (Gushue et al., 2017; Wang et al., 2020). Addressing these challenges is crucial for creating safe and supportive educational settings where open and productive discussions about race and diversity can take place (Delgado et al., 2017; Neville et al., 2013).

It is essential to address the biases within the discipline to encourage students to engage with diversity and racial topics, fostering healthy introspection to avoid harming others in the field and when providing services (Ramírez Stege et al., 2020). Addressing the fact that racism is a complex topic due to privilege and neutrality helps programs implement social changes from the foundational level while working to understand the intricacies that come with discussing certain topics that can lead to anxiety (Miller et al., 2017). Ignoring the motivating factors that lead to challenges in expressing diversity results in denial and a lack of acknowledgment of racial realities. The complexity of racism, according to Miller et al. (2017), hurts and degrades us all, even those with race privilege. It undermines democracy, scapegoats and dehumanizes people, poisons the

wellsprings of interpersonal contact, fosters friction between groups, and causes people to doubt or feel badly about themselves or unfairly condemn and degrade others. (pp. 1–2) Denying these motivating factors distorts students’ perspectives on diversity, which can lead to potentially causing harm in the mental health field (Gushue et al., 2017).

Purpose of the Study

The purpose of this quantitative study was to examine the anxiety levels experienced by graduate psychology students when discussing racial topics, as well as the extent to which specific motivational factors predict that anxiety. By investigating these relationships, the study aimed to provide insights that can help graduate programs address the lack of awareness and preparedness among students regarding racial topics.

Additionally, the study aimed to explore whether the racial background of students moderates the relationship between these motivational factors and anxiety. By addressing these relationships, the study sought to provide insights that can help graduate programs improve awareness and preparedness in engaging with racial topics, thereby fostering a more inclusive and supportive educational environment.

The literature indicated that students often avoid recognizing racism to alleviate the anxiety and discomfort associated with these conversations, as well as to maintain a positive self-image. The independent variables in this study were the motivational factors related to challenges in expressing diversity, categorized into three dimensions identified by the CoBRAS: unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues. The dependent variable was the

anxiety levels experienced by students, categorized into four levels: none, mild, moderate, and severe.

By examining the motivational factors that contribute to the avoidance of racial realities within and beyond graduate programs, this study aimed to provide insights that can help students engage in more introspective reflection and work through the anxiety that often accompanies these critical conversations. The ultimate goal is to foster a more inclusive and supportive educational environment within graduate psychology programs.

Research Questions

Research question (RQ)1: To what extent do specific motivational factors, as measured by the CoBRAS, predict anxiety levels in graduate psychology students when discussing racial topics?

*H*₀1: Specific motivational factors, as measured by the CoBRAS, will not significantly predict anxiety levels in graduate psychology students when discussing racial topics.

*H*₁1: Specific motivational factors, as measured by the CoBRAS, will significantly predict anxiety levels in graduate psychology students when discussing racial topics.

RQ2: Does the racial background of graduate psychology students moderate the relationship between motivational factors and anxiety levels when discussing racial topics?

H₀₂: The racial background of graduate psychology students does not moderate the relationship between specific motivational factors and anxiety levels when discussing racial topics.

H₁₂: The racial background of graduate psychology students moderates the relationship between specific motivational factors and anxiety levels when discussing racial topics.

The independent variables in this study were the specific motivational factors that lead to challenges in expressing diversity. These factors were categorized into three dimensions, as identified by the CoBRAS: unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues. These factors represent different attitudes or beliefs that contribute to difficulties in discussing race within the context of graduate psychology programs.

The dependent variable was the level of anxiety experienced by students when discussing racial topics in their graduate programs. Anxiety levels were measured using the PROMIS Emotional Distress Anxiety Short Form, which categorizes anxiety into levels based on the severity of emotional distress symptoms, ranging from low to potentially concerning levels of anxiety.

Additionally, the study investigated whether the racial background of students moderates the relationship between these motivational factors and anxiety levels. To capture this information, a demographic questionnaire was used to collect data on the participants' racial backgrounds.

This study employed a cross-sectional design, which means that data were collected at a single point in time from graduate psychology students across various racial backgrounds. The goal was to identify correlations between motivational factors and anxiety levels, as well as to explore if and how these relationships differ based on the students' racial backgrounds.

Theoretical Framework

The theoretical base for this research was CRT, a framework that challenges the status quo by emphasizing that race is a social construct and that racism is deeply embedded within societal institutions, rather than simply being the result of individual prejudices (Delgado et al., 2017). Central to CRT is its critique of color blindness, a concept that, it argues, fails to achieve racial justice. Color blindness ignores the pervasive and systemic nature of racism, thereby denying the unique experiences and challenges faced by People of Color. CRT advocates for the creation of spaces that have historically been denied to People of Color, aiming to foster genuine equality and justice (Bridges, 2019).

In the context of graduate psychology programs, CRT provides a robust framework for exploring and addressing the motivational factors that contribute to challenges in expressing diversity. These programs, even in the absence of overt discrimination, often reproduce hierarchical structures that perpetuate inequality (Pyle, 1999). By applying CRT, this study sought to examine how these systemic issues impact graduate students, particularly in terms of their anxiety levels and their capacity to engage in discussions about race and diversity.

This theoretical framework is crucial for guiding graduate psychology programs in identifying and dismantling the ideologies that sustain these inequalities. CRT emphasizes the importance of confronting color blindness and other factors that hinder diversity, advocating for educational institutions to create environments where all students can thrive and actively contribute to a more inclusive society. Ultimately, this framework aims to prepare future psychologists to be more aware, proactive, and effective in promoting social change.

Nature of the Study

This study employed a quantitative methodology using a nonexperimental, cross-sectional survey design with nonprobability sampling. The primary focus was on exploring the relationships between specific motivational factors and anxiety levels among graduate psychology students when discussing racial topics.

The independent variables in this study were the motivational factors related to challenges in expressing diversity. These factors were categorized into three dimensions, as identified by the CoBRAS: unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues. The dependent variable was the level of anxiety experienced by students when engaging in discussions about race. Anxiety levels were measured using the PROMIS Emotional Distress Anxiety Short Form, with scores categorized into levels of none, mild, moderate, or severe anxiety. Additionally, the study explored whether the racial background of students moderated the relationship between these motivational factors and anxiety levels. This

was captured through a demographic questionnaire that included questions about the participants' racial backgrounds.

Participants in this study were required to be enrolled in a graduate psychology program at either the master's or doctoral level. These programs could be delivered online, on campus, or through a hybrid format. Participants could be pursuing a range of specializations within graduate psychology, including but not limited to clinical practice, research, teaching, or other professional goals. Data were collected cross-sectionally, meaning they were gathered at one point in time from students across diverse racial backgrounds. The survey was administered through Google Forms, which served as the official platform for data collection. Recruitment and outreach to potential participants occurred through university participant pools, direct contact with students, social media, and other online platforms where the study link was shared. The scales used were the CoBRAS to measure the independent variables (motivational factors) and the PROMIS Emotional Distress Anxiety Short Form, which measured the dependent variable (anxiety levels). In addition, a demographic questionnaire collected information on the participants' racial backgrounds and other relevant demographic variables.

This research design was intended to identify potential correlations between the identified motivational factors and anxiety levels and to explore how these relationships differed based on the racial background of the participants. The findings from this study aimed to provide insights that could inform strategies within graduate psychology programs to prepare students more effectively for discussions about race and diversity.

Definitions

Anxiety disorders: Anxiety is defined as "anticipation of future threat" (p. 198) in the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; *DSM-5*; American Psychiatric Association, 2013).

Anxiety levels: The intensity or degree of anxiety experienced by an individual, categorized into none, mild, moderate, and severe levels, as measured by the PROMIS Emotional Distress - *Anxiety* - Short Form (Pilkonis et al., 2011).

Brave space: An environment that encourages open and honest dialogue about difficult and controversial topics, including race and diversity, where individuals are supported in taking risks and engaging in potentially uncomfortable conversations (Arao & Clemens, 2013).

Color-blind racial ideology (CBRI): A belief system that denies or minimizes the impact of race and racism in society, often leading to the perpetuation of racial inequalities (Neville et al., 2013).

Critical race theory (CRT): A theoretical framework that examines the relationship between race, racism, and power, positing that racism is deeply embedded within the fabric of society, influencing various aspects of life, including education and professional development (Delgado et al., 2017).

Cross-sectional design: A research design that involves collecting data from a population, or a representative subset, at one specific point in time to examine relationships between variables (Creswell & Creswell, 2018).

Cultural humility: An approach to interacting with individuals from diverse backgrounds that emphasizes ongoing self-reflection, self-critique, and a commitment to understanding and addressing power imbalances (Tervalon & Murray-García, 1998).

Discrimination: The practice of treating similarly situated individuals differently because of race, gender, sexual orientation, appearance, or national origin (Delgado, 2017, p. 172).

Diversity “Policy founded on the belief that individuals of different races and ethnicities can contribute to workplaces, schools, and other settings” (Delgado, 2017, p. 172).

Ethnicity: “Group characteristic often based on national origin, ancestry, language, or other cultural characteristic or pattern” (Delgado, 2017, p.174).

Microaggressions: Brief and commonplace verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward People of Color (Sue, 2016).

Moderation: In the context of this study, moderation refers to the influence of a third variable (racial background) on the relationship between an independent variable (motivational factors) and a dependent variable (anxiety levels). A moderating variable can change the strength or direction of this relationship (Baron & Kenny, 1986).

Motivational factors: The underlying attitudes or beliefs that influence an individual's behavior or responses in specific situations. In this study, these factors include unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues, as measured by the CoBRAS (Gushue et al., 2017).

Race: “Notion of a distinct biological type of human being, usually based on skin color or other physical characteristics” (Delgado, 2017, p.182).

Racial background: The racial or ethnic identity of an individual, which may influence their experiences, perceptions, and reactions to social and psychological phenomena (U.S. Census Bureau, 2019).

Racial battle fatigue (RBF): The psychological, emotional, and physiological distress experienced by individuals, particularly People of Color, as a result of constant exposure to racism and microaggressions (Wang et al., 2020).

Racism: “Any program or practice of discrimination, segregation, persecution, or mistreatment based on membership in a race or ethnic group” (Delgado, 2017, p.183).

Safe space: An environment where individuals, particularly those from marginalized groups, feel secure to express themselves without fear of discrimination, criticism, or harm (Arao & Clemens, 2013).

Unawareness of blatant racial issues: A lack of awareness or acknowledgment of overt and explicit forms of racism and racial discrimination (Gushue et al., 2017).

Unawareness of institutional discrimination: The failure to recognize the systemic and structural forms of discrimination embedded in societal institutions, which contributes to the perpetuation of inequality and disadvantage for marginalized groups (Gushue et al., 2017).

Unawareness of racial privilege: A lack of recognition or acknowledgment of the advantages that individuals have based on their race, particularly those afforded to White

individuals in a racialized society. This is part of the constructs measured by the CoBRAS (Gushue et al., 2017).

Whiteness: Refers to the cultural norms, values, and traditions that are predominantly associated with individuals of European or Caucasian descent and that often shape societal standards and structures.

Assumptions

The assumptions in this study were grounded in the theoretical framework of CRT. CRT posits that racism is deeply embedded within societal structures, influencing various aspects of life, including education and professional development (Delgado, 2017). This theoretical framework guided the exploration of how these embedded structures contribute to anxiety in discussions about race among graduate psychology students. A second assumption in the use of CRT was that it is an appropriate and applicable theoretical framework for understanding the dynamics of race and anxiety within the context of graduate psychology programs. This includes the assumption that the principles of CRT are relevant to the population studied and that they provide a valid lens through which to interpret the findings.

It was assumed that the instruments used in this study, specifically the CoBRAS and the PROMIS Emotional Distress - Anxiety - Short Form, accurately measure the constructs they are intended to assess. This includes the assumption that the CoBRAS effectively captures attitudes toward color-blind racial ideologies, including unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues. Similarly, it was assumed that the PROMIS Emotional Distress -

Anxiety - Short Form accurately measures anxiety levels across its categorized dimensions (none, mild, moderate, and severe levels of anxiety).

It was also assumed that participants respond honestly and accurately to the survey questions. Given the sensitive nature of the topics, particularly those related to race and anxiety, there is an inherent risk that participants might provide socially desirable responses. However, the anonymity of the survey is expected to mitigate this risk and encourage truthful and reflective responses.

Participants' understanding of the terminologies and concepts presented in the survey is also assumed (i.e., symptoms of anxiety and the language used in the CoBRAS). This assumption is crucial to ensure that participants can accurately respond based on their experiences and perceptions, particularly regarding their attitudes toward race and their anxiety levels when engaging in discussions about racial topics.

Finally, it was assumed that participants complete the demographic questionnaire accurately, providing essential context for analyzing the survey results. This includes accurate reporting of their racial background, which is a key variable in exploring the potential moderation effects in the study.

Scope and Delimitations

This study focused on graduate psychology students enrolled in master's and doctoral programs in the United States. Participants were drawn from various specializations within psychology, regardless of whether their programs are online, on-campus, or a hybrid of both. The research is geographically limited to the United States,

which may influence the generalizability of the findings to other countries or cultural contexts.

The instruments used in this study, specifically the CoBRAS and the PROMIS Emotional Distress Anxiety Short Form, were administered in English. As a result, participation was limited to individuals who are proficient in English. Participants were recruited through internet-based methods, including university participant pools, direct contact, and online platforms such as social media, where the survey link to Google Forms is shared. This recruitment strategy may have limited the diversity of the sample in terms of accessibility and availability of internet resources.

This study is further delimited by its exclusive focus on graduate psychology students, thereby excluding students from other academic disciplines. While this focus allows for a deeper exploration of issues specific to psychology training, it also means that the findings may not be applicable to students in other fields.

The study employed a quantitative methodology with a nonexperimental, cross-sectional design. This design is suitable for identifying correlations and patterns but does not allow for the collection of detailed narrative data, limiting the depth of qualitative insights. The use of cross-sectional data collection also restricts the ability to draw conclusions about causality or changes over time.

The specific instruments used in this study, CoBRAS and the PROMIS Emotional Distress Anxiety Short Form, are designed to assess attitudes toward color-blind racial ideologies and levels of anxiety, respectively. The choice of these instruments confines

the study to the constructs they measure, potentially overlooking other relevant aspects of participants' experiences and perceptions.

Limitations

The accuracy of the data collected in this study was contingent on the honesty of the participants. Given the sensitive nature of the topics, particularly race and anxiety, there was a risk that participants provided socially desirable responses rather than truthful answers. This potential for response bias was a significant limitation, as it may have affected the validity of the findings.

The study relied on self-reported data, which is inherently subject to various biases, including recall bias, exaggeration, and misinterpretation of questions. Participants' perceptions and their willingness to disclose accurate and truthful information are critical factors that may influence the reliability of the data.

As the study was geographically limited to graduate psychology students in the United States and territories, the findings may not be generalizable to other populations, including students from different countries or academic disciplines. The focus on psychology students also means that the results may not be applicable to those in other fields of study.

Participants were recruited through internet-based methods, including university participant pools, direct contact, and online platforms such as social media. This recruitment strategy may introduce selection bias, as it is limited to individuals who have access to and are comfortable with using online platforms. Those who do not have

reliable internet access or who are less comfortable with online surveys may be underrepresented in the sample.

The study's power and the representativeness of the sample depend on the ability to recruit enough graduate psychology students. The availability and willingness of these students to participate in the study may affect the overall sample size, potentially limiting the statistical power of the study and the robustness of the conclusions that can be drawn.

Significance of the Study

This study aimed to fill a critical gap in the understanding of motivational factors that contribute to the challenges of expressing diversity, particularly in relation to anxiety levels when discussing race among graduate psychology students. The original contribution of this study lies in its potential to help graduate psychology programs more effectively support students who experience anxiety in racial conversations due to the identified motivational factors. By addressing these factors, the study sought to provide actionable insights that can guide both students and faculty in navigating these complex and often uncomfortable discussions without fear of being perceived as “bad” individuals.

The significance of this study extends to the ability of psychology graduate programs to address the biases that both students and faculty carry regarding race and racism. By bringing these biases to light, the study encourages an environment where such issues can be openly discussed and addressed, reducing the likelihood of avoiding the topic due to fear or discomfort. This openness can lead to more effective engagement

with racial realities, ultimately reducing the challenges associated with expressing diversity.

This study's potential for positive social change lies in its ability to identify and analyze the motivational factors that contribute to distortions of racial realities within the educational formation of future psychologists. Understanding how anxiety influences these challenges can lead to more effective training and support mechanisms, thereby enhancing the process of becoming a psychologist who is equipped to handle difficult conversations about race and diversity.

In relation to CRT, this study can contribute significantly to the discipline by exploring how anxiety interacts with the understanding of societal dynamics within the context of diversity in graduate psychology programs. CRT provides a critical lens through which to examine the systemic issues that contribute to these challenges, and this study seeks to explore whether and, if so, how anxiety plays a role in these dynamics within the political and social climate of the time. The findings can inform future interventions and resources aimed at addressing these issues more effectively.

The significance of this study to the practice of psychology is profound. By fostering a deeper understanding of awareness and biases related to race and diversity, the study aims to equip future mental health providers with the tools needed to recognize and challenge the systemic forces that shape their views and practices. Psychologists have played and continue to play a pivotal role in mental health, and their ability to engage in difficult conversations about race and diversity is essential to reducing bias and avoiding color-blind approaches that overlook the realities of a racially stratified society. This

study can initiate crucial conversations about the potential role of anxiety in these challenges, offering a pathway to more informed and reflective practice.

Finally, the significance of this study in promoting social change is closely tied to the educational formation of psychologists who are mindful of the broader societal realities that influence their work. By addressing the potential anxiety associated with discussions of race and diversity, this study aims to equip graduate psychology programs with the knowledge and strategies needed to educate and train future psychologists who are better prepared to engage with these issues in their professional practice. This, in turn, can lead to more effective and equitable mental health care, as well as a greater capacity to address the root causes of racial- and diversity-related problems in various settings.

Summary

This quantitative study, titled “Expressing Diversity and Anxiety Among Graduate Psychology Students,” aimed to explore the relationship between the challenges of expressing diversity and the anxiety experienced by graduate psychology students when discussing racial topics. Grounded in CRT, this study examined how systemic issues, including color blindness and racial privilege, contribute to these challenges within graduate psychology programs.

The study employed a nonexperimental, cross-sectional design to investigate the extent to which specific motivational factors, categorized into unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues, predict levels of anxiety among students. The PROMIS Emotional Distress

Anxiety Short Form and the CoBRAS were used to measure the constructs of anxiety and color-blind racial attitudes, respectively.

The significance of this study lies in its potential to inform graduate psychology programs about the underlying factors that contribute to anxiety in discussions about race, ultimately helping to foster more inclusive and supportive educational environments. By addressing these issues, the study seeks to promote positive social change, equipping future psychologists with the awareness and tools needed to engage effectively with diversity in their professional practice. In Chapter 2, a comprehensive review of the literature will be presented to provide the theoretical and empirical foundations that support the rationale for this study.

Chapter 2: Literature Review

Introduction

The lack of diversity within psychology programs has shown that conversations about topics such as racism, power, oppression, and privilege can lead to color blindness (Wang et al., 2020), which creates a challenge when accounting for and expressing diversity. The current political climate makes it urgent that the discipline address with future psychologists the importance of understanding how challenges in expressing diversity can lead to harm within graduate programs and, consequently, to services in the increasingly diverse population (Gushue et al., 2017). The challenge of expressing diversity and acknowledging anxiety regarding racism discussions in graduate psychology programs may create a larger issue with future mental health professionals' lack of understanding of diversity, as racism has become an increasingly complicated topic to address due to privilege and neutrality (Miller et al., 2017). Addressing these complexities can help programs encourage social change from the onset of their development, with an awareness that the discussion of these topics can lead to feelings of anxiety.

Literature Search Strategy

The keywords used within the databases to collect peer-reviewed articles for the literature review were the following: *trainee, clinical supervisor, supervisory relationship, cultural, diversity, color blindness, race, privilege, training, racism, grad school, power dynamics, Black/African American, Biracial Black, BIPOC, and Multiracial Black, Latinx, Asian, Hispanic, White, United States, multicultural*

perception, training, therapy, clinical, teach, doctoral, graduate school, multicultural, competencies, critical race theory, intersectionality, community, minorities, postdoctoral, internship, practicum, trainee, stress, racial battle fatigue, and doctoral student.

Research was conducted in several databases within the American Psychological Association, including APA PsycArticles, APA PsycBooks, APA PsycExtra, and APA PsycInfo. Furthermore, research books and peer-reviewed articles were also identified. Other search engines included Google, Google Scholar, and EBSCO. The scope of the literature review included the years between 2013 and 2024.

Theoretical Foundation

The theoretical base for this research was CRT. CRT became more prominent during the 1970s within the legal community as a result of the Civil Rights Movement in the 1960s (Delgado, 2017). The first African-American tenured professor, Derrick Bell, at Harvard Law School, is known as the father of CRT, which appeared in his thesis; CRT: An Introduction (Delgado, 2017). CRT acknowledges that racism is defined as acts that are discrete, identifiable, intentional, and irrational by bad actors (Bridges, 2019). Society provides a safe space to disregard how the system affects and impacts individuals in the community (Bridges, 2019). According to Stauffer (2020), “CRT has demonstrated that the concept of 'race' and the definition of 'the races' are socially constructed, and that these constructions change to meet the needs of the White majority” (p. 456).

CRT explores a deeper meaning in what defines racism, even in institutions constructed after the civil rights movement. Thus, CRT brings to light the historical fact that, even when racism is produced and reinforced by individuals within a system, there

is an institution that sustains it (Bridges, 2019). Social structures influence how the cultural system works from the basics of communication within our language, to the laws that determine the consequences of our actions through values that integrate stereotypes and narratives that favor some races over others (Stauffer, 2020). Thus, according to Bridges (2019), “social constructionism underscores that the psychological attributes and tendencies that society has imagined racial groups to possess have been taken to justify all manner of different treatment and to legitimate all manner of social inequalities” (p. 129). CRT highlights concepts related to systems of power, privilege, and social identity, with influencing factors such as sexual orientation, social class, culture, religion, citizenship, ethnicity and race, gender, age, and health (Miller & Garran, 2017).

CRT was selected for this study due to its connection to social justice matters and the necessity within the psychology graduate field to understand how topics related to racism (in all categories) impact the ways in which communication and teaching are presented to and ultimately affect students’ levels of anxiety. Vassar and Barnett (2020) explained that “CRT urges us to examine and challenges dominant ideologies and claims of race neutrality, objectivity, meritocracy, color-blindness and equal opportunity” (p.70). Color-blindness, or CBRI, supports CRT by defining blatant racism (direct discrimination), institutional racism (laws and policies maintaining White culture), and White privilege (systemic benefits of White skin (Gushue, 2017). Due to the pervasiveness of CBRI, we have been conditioned to ignore differences in social identities, making it unsurprising if there is resistance to addressing how our language downplays race and experiences of racism (Banks, 2014).

According to Milner (2017), CRT approaches how race and racism have been integrated into society, to the point that they are part of U. S. social layers, intricated in the education system, along with the convergence of ideologies encouraged by the White majority. Integrating the principles of CRT into psychological science could lead to transformative changes in the language used, the theoretical frameworks adopted, and the narratives constructed around minority groups, as noted by Volpe (2019). Volpe stated that psychological science will affect health disparities within racial systems because it will infiltrate within the language and methodological approach, leading to acknowledgment of racism as systemic, affecting all narratives and systems of power (Volpe, 2019).

Within the context of education, CRT reviews how inequalities in race within the education system are dictated by normative Whiteness, whereby the discourse of People of Color is perceived as inferior to the superior normative of White people (Dixson & Anderson, 2018). CRT in education determines how historical events shape inequality within 21st-century educational systems, which mediated identity markers of race (Dixson & Anderson, 2018). CRT relates to the present study as it addresses the challenges of expressing diversity and anxiety regarding racism within psychology graduate programs. There is evidence of minorities, such as Black students, striving for more than perfection to achieve higher education due to historical systemic stereotypes of intellectual inferiority (Raymundo, 2021).

Taking into consideration the basis of CRT and how it can be integrated into graduate school, and given the lack of diversity in graduate programs, the numbers paint

a clear picture. Stauffer (2020) indicated that 85% of the students in graduate school who were able to financially attend and graduate to be hired within their profession were English-speaking, middle-class women. Connected to CRT, critical race feminism (CRF) supported the CRT framework of how race defines several ideologies within U.S. society (Squire, 2018). According to Squire (2018), “CRF adds to the tenets of CRT is an acknowledgment that higher education exists in gendered and racialized context among others” (p. 18). Therefore, the lack of men of color within the graduate field compared to the undergraduate level indicates inconsistencies regarding graduate school programs affected by structures of power that provide advantages and disadvantages to everyone within the system belonging to the cohort of a doctoral program (Squire, 2018).

The research examined the narrative experiences of five Black male graduate students and faculty members, as part of graduate student cohorts and faculty appointments, and how being defined by race made them feel unsafe and pressured to prove their place among the cohort (Squire, 2018). The study’s collection of experiences pointed out that, although these men had different stories, they all shared one common denominator, they understood their privilege in being part of a graduate student cohort or faculty, and they shared that faculties and institutions needed to challenge assumptions about men of color constantly and take action regarding their underrepresentation within doctoral programs (Squire, 2018).

Additionally, understanding the challenges of expressing diversity within graduate programs, and the problems that it causes for all involved, is crucial; for example, placing the responsibility of educating White peers on students of color in

higher education institutions left them emotionally exhausted (Hurtado, 2019). On the other hand, White women benefit from the accepted aspects of femininity within Whiteness, which gives them privilege within academia in comparison to Black women (Vassar & Barnett, 2020). Black women were often erased from the narrative when academia refers to “women” due to marginalization in opportunities and lack of representation within faculties (representing only 6%), which presents additional challenges within academic spaces (Vassar & Barnett, 2020). Microaggressions due to racism within the academic system are often normalized within higher education, which encourages the success of the majority while leaving Black and female academics behind (Simatele, 2018). According to Vassar and Barnett (2020), “CRT in education exposes racism and delineates its manifestation in schools’ policies and practices” (p. 62). Color-blindness is an unfortunate reality within academia and clearly impacts the mental health of minority groups.

This study examined two key RQs: (a) What is the relationship between motivational factors and the anxiety experienced during discussions of diversity-related challenges in graduate psychology programs? and (b) To what extent is the anxiety experienced in these discussions related to race? These questions are essential for CRT as they explore the motivational factors influencing anxiety through measures of color-blind racial attitudes and anxiety scales, highlighting the complex dynamics graduate programs face when addressing issues of racism. Research supported that discrimination and racism are prevalent in academia, as evidenced by stories and testimonies from those within the field (Writer & Watson, 2019). CRT constructs bring the opportunity to explore alternate

realities within educational institutions (Writer & Watson, 2019). According to Vassar and Barnett (2020), race has a greater impact on minorities than gender and class within academic settings. Thus, the research builds upon the existing theory, integrating the anxiety variable within psychology graduate programs.

Literature Review Related to Key Variables and/or Concepts

Writer and Watson (2019) suggested that “faculty and administration begin addressing these issues and obstacles by having courageous conversations in which truths are spoken, discomfort experienced, engagement maintained, and non-closure expected and accepted” (p. 38). The article highlighted, through CRT methodology, the experiences of faculty members in terms of race and power within historical and systemic ideologies that support racism. It also addressed the concepts of majoritarian and minoritized perspectives, as well as their influence in enforcing power that leads to one single narrative within the university setting. The stories shared provide a perspective that addresses academia’s role in endorsing superior groups over minority discourses (Writer & Watson, 2019). The faculty shared their challenges with mentoring, which affected their jobs due to feelings of isolation (Writer & Watson, 2019). One faculty member experienced hyper-visibility when the president of the university identified her as a Native American faculty member with a doctorate, implying that people in the Native American community did not commonly achieve a doctoral degree; her name was accompanied by the statement of her race (Writer & Watson, 2019). Other challenges involved being viewed as the figurehead whenever another minority candidate applied to the university, which made her feel used as a diversity selling point (Writer & Watson,

2019). The article also discussed the concept of “two for one,” which refers to the expectation that minority women, particularly those from Indigenous backgrounds, participate in multiple committees and work extensively with students. This burden often resulted in their scholarly work being overlooked (Writer & Watson, 2019). The authors argued that this perception was rooted in Indigenous epistemologies, emphasizing the need to decolonize academic practices and address systemic issues within the U.S. education system (Writer & Watson, 2019).

Another participant in the same article, an African American gay single man, shared that his academic formation had occurred through a White lens, which led him to further explore the topics of diversity, inclusion, race, and culture, ultimately becoming an expert (Writer & Watson, 2019). He reported that, to grow and be retained, he needed to maintain his research within those same topics if he wanted to apply for scholarships. He also explained that the concepts of race, gender, and class were crucial for power dynamics (Writer & Watson, 2019). He shared his awareness of how Black faculty members were expected to express their thoughts logically and avoid emotional language to prevent being perceived as hostile, whereas White colleagues, including the university president, were not held to the same expectations (Writer & Watson, 2019).

Galán (2023) evaluated doctoral programs within the field of clinical psychology, considering the ability to enroll and retain graduate students of color, while also taking into account students’ perceptions of their roles as students or faculty, in addition to their racial identity. The research was a qualitative study conducted through an anonymous online survey that included 297 participants (Galán, 2023). The survey addressed topics

such as recruitment and retention efforts for People of Color, perceptions of racial discrimination, sense of belonging, cultural challenges, and racism within the programs. The results indicated that minorities such as Asian, Black, and Latinx students report fewer positive perceptions, less sense of belonging, and greater sense of racial discrimination compared to those who identify as White (Galán, 2023).

Trainees in psychology must develop multicultural competence and address color blindness in their socio-cultural contexts (Gushue, 2017). Graduate students are motivated to appear nonracist and avoid racial prejudice, driven by external motivations (how others perceive them) and internal motivations (personal aspirations to be nonracist). This affects social desirability, influenced by impression management (altering public image) and self-deception (adjusting statements to match politically correct responses) (Gushue, 2017). Therefore, trainees who do not recognize these CBRI bases are more likely to deceive themselves by ignoring the racist structures within society, thus affecting their clients and decreasing their multicultural competencies. Gushue (2017) addressed racial attitudes, and participants included 198 White graduate student trainees in psychology within urban universities in the United States in the Northeast. The CoBRAS was used to evaluate the motivation to respond without prejudice and bi-dimensional social desirability. The results indicated that there was a significant relationship between White privilege denial sustained by self-deception within institutional racism (Gushue, 2017).

Ragland Woods (2021) explored the concept of RBF among Black students who attended historically White higher education institutions. The study was cross-sectional,

non-experimental, and quantitative descriptive, focusing on RBF in Black counseling and clinical graduate students (BGS). The sample included 57 graduate students aged 18 years or older who self-identified as Black/African American, Biracial Black, or Multiracial Black (Ragland Woods, 2021). The documentation of the impact of racism and its associated adverse consequences was collectively referred to as racial stress, race-related stress, and racial trauma (Ragland Woods, 2021). These detrimental effects negatively impacted the overall well-being of individuals of African descent and other racial minorities. Black graduate students reported feeling unable to address racism perpetuated by their professors, who both graded them and created the curriculum (Ragland Woods, 2021). In addition, BGS encountered racial microaggressions, often being perceived as aggressors, while other students disengaged out of defensiveness or experienced anxiety or fear, leading to White fragility or White silence (Ragland Woods, 2021). Findings indicated that BGS encountered racial microaggressions in environments designated for education, training, advising, and supervision. The resulting RBF varied based on the specific role or context of the student and their gender.

The impact of RBF within the dominant European American ideology in the field of psychology creates challenges for graduate students of color, causing stress from being consistently targeted by the system (Wang, 2020). In addition, the psychology field is supported by White hegemonic perspectives that reinforce these racial microaggressions (Wang, 2020). Although the literature acknowledges the effects of microaggressions, the concept of RBF is not often explored within clinical and supervisory development (Wang, 2020). One major concern in supervisor-supervisee relationships is that trainees

are increasingly educated in racial identity terminology and development; therefore, the problem of RBF needs to be addressed with a broader understanding of White dominance in psychology (Wang, 2020).

Wang (2020) also conducted a community autoethnography centered on the encounters of three doctoral-level counseling psychology students. The participants shared their experiences of RBF in various supervisory processes during their internship year. The first participant identified herself as primarily biracial and experienced herself as a Black woman from a working-class background. She described the pressure from White staff to represent her group of Black Americans within her cohort. Due to power dynamics in academia, she felt unable to tell her professors that she was pressured to focus on African American college students in her outreach project, as she feared negative evaluation (Wang, 2020). She reported anxiety from her past experiences of being in the minority within the White system and her inability to correctly address the many Americans omitted from conversations.

The second participant was a heterosexual, bicultural, working-class, first-generation White college student who was part of a White majority staff working with a culturally diverse cohort. She expressed concerns about how diverse students might perceive her and about her ability to connect with White staff who were allies of minorities and valued multicultural work (Wang, 2020). She described experiencing anxiety from engaging in honest conversations with her cohort and addressing issues in staff meetings, which caused her to become hyperaware of how others perceived her.

The third participant was a graduate student woman of color, an immigrant to the United States who identified as Taiwanese/Chinese. She explained that she was often perceived as having a greater understanding of cultural concepts and a stronger ability to teach others about them, which forced her to take on the responsibility of studying these topics (Wang, 2020). The supervision experience strongly impacted her, as she felt responsible for her own supervisory learning process in multicultural competencies. Although she wanted to share how systemic oppression within graduate school and supervisory processes affected her, she recognized her limited power as a woman of color in a trainee position (Wang, 2020). She reported experiencing anxiety with the added emotional toll of being part of multicultural activities and having to discuss power and privilege, which led her to worry that she might jeopardize professional connections or undermine her trajectory. She described feeling diminutive, powerless, and unseen within the larger system (Wang, 2020).

Most studies highlighted the importance of hiring People of Color in power positions to promote diversity in supervisor-trainee relationships (Wang, 2020). In addition, researchers recommended the use of supervision scales to explore experiences within these relationships, particularly with regard to power dynamics and boundaries.

Introduction to CRT

CRT is based on historical components that have supported the theory in promoting social change. The concept of race as a biological entity has influenced how social constructs are understood by the human psyche as natural (Bridges, 2019). In the 1800s, Europe created categories of race using biological factors. However, these

biological factors were supported by historical social calamities (Bridges, 2019). After the Holocaust in the 1930s-1940s, the understanding of race shifted from being biologically supported to being socially constructed (Bridges, 2019). Geneticists, doctors, and health-related scientists led the way in using arguments based on genetics that defined populations as related to ancestral geographic locations, suggesting humans came from specific places and lineages (Bridges, 2019).

Nevertheless, assuming that race is determined by genes traced back to certain regions leads to the belief that certain racial characteristics are exclusive to certain groups of people, an assumption that has historically been proven incorrect (Bridges, 2019). For example, people categorized within the White race have been genetically traced to West African ancestry, while those categorized as Black have been shown to have European roots (Bridges, 2019). Race can be defined as “systems of meanings” in which physical features, supported by social constructions, create social inequalities due to their meanings, inequalities that historically served narratives of slavery and abuse (Bridges, 2019).

CRT’s main concepts provide an understanding of the theory as a framework that examines society within its relationship to power dynamics. Intersectionality considers aspects of identity such as race, gender, class, sexuality, and physical ability, and how these interact to shape an individual’s experiences with privilege and oppression (Delgado, 2017). According to Bridges (2019), the concept of intersectionality “should be understood as a challenge to anti-essentialism and its will to discard categorical thinking completely” (p. 237). Structural determinism, as defined within CRT, refers to societal

institutions, laws, policies, and practices that perpetuate racial inequality and privilege certain racial groups over others (Delgado, 2017).

In addition, structural determinism is supported by four concepts that provide a baseline: (a) "tools of thought and the dilemma of law reform" indicates that the situation must improve; however, it is nonexistent due to past rules and understandings that are based on the law and legal categories where the understanding is replicated (Delgado, 2017). (b) "The empathic fallacy" supports the idea that the language we speak has been constructed with different meanings that are attached to the same belief system that is unable to provide quick change because the original narrative and preconceptions will perpetuate the psyche based on stereotypes over the new empathic structure (Delgado, 2017). (c) "Serving two masters" establishes the contradictions of the law vs. those who are in need; the conflicts establish how those who are pursuing social changes at the same time impact the minority's wants being replaced (Delgado, 2017). (d) Delgado (2017) argued that "race remedies law as a homeostatic device" causes civil rights laws to progress slowly, placing minorities at risk by creating a disconnect between the ideal of justice and actual legal practices, which misleads the general public into believing the system is fair and just, while perpetuating stigma against minorities.

Understanding intersectionality and structural determinism is in the social bases such as names and identities. An individual's name in the social context is connected to how they are perceived and, thus, how their identity is formed (Wang, 2023). Ethnic names correlate to minorities, which leads to challenges with spelling, meanings and pronunciation, and the integration within majority groups (Wang, 2023). Consequently,

ethnic names can lead to racial microaggressions, causing minorities to feel uncertain whether the people around them are being unintentionally or intentionally ignorant (Wang, 2023). CRT addresses the inequality within the educational system, and has led to multicultural education, which bases the framework of education on inclusion. While racial segregation in schools was addressed historically, contemporary patterns demonstrate that certain minorities often continue to attend the same schools (Bridges, 2019).

Intersectionality and Mental Health

Understanding how aspects of intersectionality such as social, economic, cultural and environmental factors may impact all services related to mental health due to the overall determinants that define an individual is crucial (Edyburn, 2023). It is important to note, however, that these determinants are influenced by politics, affecting access to care and how it is set up in the mental health fields (Edyburn, 2023). Intersectionality theory suggests that various marginalized identities intersect with power systems to create unique experiences of systemic inequity and oppression (Clement et al., 2024). Therefore, global factors such as the 2020 COVID-19 pandemic affected minorities, specifically minors, in serious ways (Edyburn, 2023). Experiencing discrimination that intersects across multiple aspects of identity can have more pronounced effects, as it simultaneously affects various facets of a person's identity (Launius & Lydecker, 2024). Adults who encounter multiple forms of discrimination are more susceptible to developing cardiovascular diseases compared to those facing singular forms of discrimination (Launius & Lydecker, 2024). Similarly, individuals subjected to

discrimination based on weight report elevated levels of depression compared to those who have not faced such discrimination (Launius & Lydecker, 2024). Intersectionality impacts mental health when it is approached with equality and not equity (Edyburn, 2023). Equity in intersectionality within the mental health services works with the idea of respecting individual differences and understanding how unique determinants affect their overall lives (Edyburn, 2023). Consistent with these perspectives, Williams et al. (2012) found that a strong, positive ethnic identity among African American adults was associated with reduced symptoms of anxiety and depression, suggesting that cultural and racial identity can serve as protective factors for mental health. Considering the dimensions of graduate student development, it is important to understand how their mental health is impacted by the concepts of intersectionality, which highlight the overlapping and interconnected social identities, such as race, gender, and socioeconomic status, that shape their experiences and challenges (Clement et al., 2024). Thus, the four dimensions that graduate programs should encompass include students being supported, implemented procedures and policies for their protection and ethics, interactions within networking through their professional development and integration within politics and social change (Clement et al., 2024).

Intersectionality also provides an understanding of graduate students who experience challenges in their programs, leading to inequities that heighten stress and contribute to anxiety, depression, and risk of suicide (Clement et al., 2024). Graduate students at greater risk of these challenges include those within the lesbian, gay, bisexual,

transgender, nonbinary, queer and/or questioning, intersex, asexual or agender, and two-spirit (LGBTQIA2S) community (Clement et al., 2024).

Regarding mental health services, evaluating the provided services to minorities such as diverse urban population, such as refugees, immigrants, and underrepresented groups is especially urgent (Clauss-Ehlers et al., 2024). An evaluation of the effectiveness of a cultural consultation service (CCS) designed to improve mental health found that it led to treatment modifications in 70% of cases, additional treatments in 48% of cases, and revised diagnoses in 23% of cases (Clauss-Ehlers et al., 2024).

CRT and Intersectionality

One principle in CRT is intersectionality, which recognizes the intertwined significance of race and gender in comprehending societal issues (Kolivoski, 2022). Intersectionality within CRT entails investigating how multiple social identities intersect and overlap, particularly in relation to structural oppression and discrimination (Kolivoski, 2022). CRT also advances notions of social justice that are interconnected with achieving equity based on identity and liberation from structures of White supremacy, reaching beyond economic concerns within the workplace (Lee & Tapia, 2023). Intersectionality can be understood in CRT when emphasizing, examining, and addressing social inequalities and injustices (Else-Quest, 2023). It can also be used to explain how women of color, who are also students and veterans, experience marginalization (Saunders, 2023).

When considering CRT principles, recognizing racism as pervasive, understanding race as socially constructed, and acknowledging how different forms of

oppression intersect provides an understanding of the importance of intersectionality in shaping the experiences of these women (Saunders, 2023). Saunders (2023) found that when examining the intersecting identities of race, gender, and veteran status, utilizing intersectionality grounded in CRT provides the most comprehensive understanding of the compounded disadvantages faced by these populations. Considering the prominence of the race classification of Whiteness within higher education fosters an atmosphere where women of color student veterans are notably absent from campus representation, both within veterans' facilities and academic settings (Saunders, 2023). Moreover, Saunders reported that the social isolation experienced by women of color student veterans in predominantly White institutions leads them to doubt their abilities significantly, resulting in overwhelming layers of self-doubt.

Impact of CRT on Individuals and Communities:

Critical race theorists understand that racism and discrimination have negative consequences on the mental health of Black students and faculty members, resulting in a decrease in their academic self-esteem, confidence, and mental resilience (McGee, 2015). As racially discriminatory encounters encompass various dimensions, the multidimensional approach of CRT aids in recognizing and emphasizing the correlation between race and mental well-being (McGee, 2015).

Colorblind ideology, favored by White Americans, emphasizes individual characteristics over race, perpetuating White privilege. Its promotion in institutions harms productivity and undermines the sense of identity safety for minority students (Salter, 2013). In workplaces, White American coworkers' endorsement of colorblind ideology

predicts a negative impact on psychological engagement among Black American coworkers. Overall, it fosters denial of racism and reduces support for anti-racist policies (Salter, 2013).

In a study by Bohonos (2021), the CRT lens investigated the racial advantages experienced by working-class White men despite their social and economic marginalization. The research results indicated that working-class White men have better access to low-level jobs than lower-class Black individuals, providing them with relative job security and opportunities to demonstrate their work ethic (Bohonos, 2021). For example, seeing "now hiring" signs offers reassurance to lower-class White men, confirming their eligibility for employment opportunities, enabling them to showcase their work ethic, and providing a degree of protection against descending into the underclass (Bohonos, 2021). Therefore, White men feel trapped in a cycle where hard work does not alleviate their near-poverty living conditions without recognizing the privilege within the overall social structure (Bohonos, 2021). CRT provides a baseline of how having a White racial status carries value for an individual; regardless of socioeconomic status, being White will afford various privileges, including the right to exclude others (Bohonos, 2021). Minority groups often feel unwelcome in predominantly White spaces, where accessing essential resources, such as employment, may require them to endure humiliation and hostility (Bohonos, 2021). Literature on White privilege further emphasizes how White individuals benefit from systemic and interpersonal manifestations of racism (Bohonos, 2021).

Furthermore, Black CRT examined how the epistemic norms of the Western world, which define knowledge and humanity, are implicated in a manner that associates normalcy and acceptability with Whiteness, while linking undesirability and incorrectness with Blackness, necessitating Western intervention for progress (Alexander, 2022). One example within academia is how the examination of interactions between White Femme Faculty (WFF) and Black Femme Faculty (BFF) unveiled widespread instances of anti-Blackness. WFF often overlooked the distinct needs, experiences, and sociohistorical backgrounds of BFF, leading to primarily adversarial or strained relationships (Alexander, 2022). Additionally, WFF served as gatekeepers, restricting BFF's complete involvement in organizational activities and withholding acknowledgment of their intellectual contributions (Alexander, 2022).

CRT and Education

The understanding of education within the system promotes the ideology of the elite status quo (Lopez, 2019). There is a need for CRT in schools, especially in low-performing public schools in minority districts with a lack of funding (Bridges, 2019). CRT helps unmask systemic inequities, such as the lack of funding and resources in schools within minority districts, which perpetuate racially isolated schools (Bridge, 2019). These schools often lack adequate resources compared to predominantly White schools, contributing to environments where minority students have few to no classmates with whom they can identify (Bridge, 2019). The education system often reflects and supports the purposes of other societal institutions, such as the criminal justice system (Lopez, 2019). To fully understand how racial perceptions are embedded within the

education system, it is essential to examine these issues through historical, geographical, and methodological dimensions (Lopez, 2019). As established before, the construct of race has supported historically groups in power, sustained by weak genetic and geographical narratives that provide a baseline for racial differences (Lopez, 2019). However, the methodological approach highlights how the shift from biological concepts to cultural racism has shaped the human psyche, promoting racial perceptions within society (Lopez, 2019).

This evolving awareness of cultural racism intersects with acts of cultural appropriation, where dominant groups exploit and appropriate cultural elements from marginalized communities, reflecting ongoing power imbalances (Parland, 2023). Traditionally, discussions on religious appropriation have focused on Westerners appropriating and showcasing religions, often reinforcing Western dominance in cultural evolution (Parland, 2023). Counter-storytelling, rooted in CRT, serves as a valuable method to uncover power dynamics within educational settings, including potential instances of spiritual appropriation (Parland, 2023). It functions as an analytical tool to examine discourses surrounding race and intersecting forms of oppression (Parland, 2023). Research has indicated that CRT provides practical tools for analyzing power structures within educational institutions (Parland, 2023). A novel term introduced in the discussion is "fraudulent appropriation," denoting situations where teachers from the dominant group assume the authority to educate minority children about their own religious traditions, potentially leading to cultural erasure and exploitation (Parland, 2023).

In higher education, students often encounter diverse populations for the first time, expanding their perspectives (Perez, 2022). Utilizing CRT requires a high level of proficiency typically attained in graduate education (Perez, 2022). CRT equips social workers with the critical thinking skills to confront and deconstruct racist systems (Perez, 2022). It identifies and names both the systems perpetuating racism and their perpetrators, enabling a comprehensive understanding of history and facilitating discourse beyond individual actions (Perez, 2022). CRT advocates for a multi-directional, structural approach to addressing social injustice, surpassing mere expansion of opportunities (Perez, 2022). It provides a framework that transcends content integration, equity pedagogy, and prejudice reduction, which may inadvertently accentuate differences and hinder the examination of underlying systems (Perez, 2022). The research underscored the importance of deliberate intent when teaching about race and racism (Perez, 2022). Incorporating diverse voices, a fundamental tenet of CRT, is crucial for creating socially just educational programs, not only for social work students but also for those in psychology programs, who will similarly engage with diverse communities (Perez, 2022).

The absence of education on race and racism in both social work and psychology programs negatively impacts mental health professionals. Just as social workers confront a wide array of social issues, psychology students also face the challenge of addressing complex cultural dynamics in their future practice, underscoring the urgent need for curricula that critically engage with race and systemic inequities. Neglecting or simplifying race and racism as issues solely affecting People of Color, rather than

acknowledging their impact on White individuals, perpetuates the racial hierarchy (Perez, 2022). Therefore, during a CRT-focused classroom, parts form the premise that racism is real, a social construct intertwined with other identities, and that People of Color have unique credibility to speak about race and racism due to historical positioning (Lerner, 2022).

In addition, within education, there are challenges of color-evasiveness, which is described as the active repression and avoidance of race in conversation (Hodge & Sprain, 2024). Color evasion, as a concept, highlights participants' efforts to avoid discussing race, offering advantages over color-blind talk (Hodge & Sprain, 2024). Hodge and Sprain (2024) examined how color evasion hindered democratic inclusion in community and educational discussions and how facilitators responded to it.

Critical race discourse analysis (CRDA), derived from CRT, emphasizes the centrality of race and its intersections in interaction, discursive practices, and language use, advocating for explicit contextualization within the structures and systems influenced by White supremacy (Hodge & Sprain, 2024). CRDA locates racism and oppression in everyday talk, highlighting how they are normalized in communicative practices. Facilitators should be attentive to participants denying or transcending race (Hodge & Sprain, 2024). The analysis revealed that color-evasiveness, as a discursive tactic, protected Whiteness, suppressed recognition of non-White participants, and unfairly shifted the burden of dialogue from listeners to speakers, disproportionately impacting marginalized individuals (Hodge & Sprain, 2024) Dialogue has been employed in classrooms, communities, and non-profit organizations to address racial prejudice,

racism, and division in the United States (Hodge & Sprain, 2024). The authors recommended using double- or triple-barreled questions to prompt participants to confront the implications of color-evasiveness and explore alternatives (Hodge & Sprain, 2024). This approach fostered flexibility and encouraged dialogue about addressing and overcoming color-evasion tendencies ingrained through socialization (Hodge & Sprain, 2024).

Cultural Competence and Mental Health Services

Hamilton (2024) explored the experiences of Black therapists in the workplace through CRT, highlighting how racism is often normalized within institutions and workspaces. Therefore, CRT bases racism as a systemic and ingrained aspect of society (Hamilton, 2024). By acknowledging racism as common and normal, CRT suggests that Black individuals, including therapists, are likely to encounter racism in various aspects of their lives, including their professional environments (Hamilton, 2024). The findings discussed align with this perspective, as all participants reported experiencing racist events in their workplace (Hamilton, 2024). Furthermore, it emphasizes the detrimental effects of racism on the well-being of Black therapists, including increased anxiety and depression, as well as the social consequences of disconnecting from others (Hamilton, 2024). These effects resonate with existing literature that highlights the pervasive and harmful impacts of racism on mental and emotional health (Hamilton, 2024). Therefore, mental health organizations are immersed within White cultural power (Hoffman, 2023). Understanding how race and Whiteness are within these institutions and recognizing the

need for discussions and awareness around these issues, despite differing perspectives and disagreements, is necessary (Hoffman, 2023).

Furthermore, the prevalence of racial discrimination experienced among Black, Indigenous, and other People of Color (BIPOC) in healthcare settings leads to mental health professionals recognizing and confronting their biases that may negatively impact their interactions with patients (Cénat et al., 2024). Additionally, it discussed how racial bias can affect clinical practices, such as overemphasizing certain symptoms in specific racial groups (Cénat et al., 2024). Among mental health services, there is the reality of possible racial trauma that takes symptoms of post-traumatic stress disorder (PTSD), characterized by intrusive, avoidant, and hyperarousal symptoms. However, how these symptoms are recognized in relation to racism varies, leading to psychological symptoms such as anxiety or depression, collectively referred to as racial stress (Hall-Clark, 2024). Following, how clinicians assess for the impact of these symptoms in minority individuals within mental health field is to be evaluated. Traditionally, adults are screened using versions of the Posttraumatic Stress Disorder Checklist (PCL) based on the DSM-IV. However, these measures do not specifically address experiences of racism (Hall-Clark, 2024). Only recently have specific instruments been developed to assess racial stress and trauma, including the UConn Racial/Ethnic Stress and Trauma Survey, Race-Based Traumatic Stress Symptom Scale, Trauma Symptoms of Discrimination Scale, and Racial Trauma Scale (Hall-Clark, 2024). These instruments provide a more comprehensive understanding of the psychological impact of racism on individuals (Hall-Clark, 2024).

Critiques and Controversies

CRT is critiqued because it aims to evaluate and educate others about the subjective experiences of enduring racism (Bridges, 2019). Through storytelling, individuals share their personal narratives, allowing others to empathize with and understand the impact of racism on their worldview (Bridges, 2019). However, CRT's reliance on storytelling also challenges the notion of objective truth, particularly in a postmodern context where truth is viewed as subjective and contextual (Bridges, 2019). While storytelling can be empowering for non-White individuals to heal and reclaim their narratives, it is criticized for prioritizing emotions over reasoning (Bridges, 2019). Furthermore, CRT faces criticism for not adhering to normative standards of truth, which suggest that there is one objective truth that can be discovered through proper tools and methods (Bridges, 2019). This critique challenges the validity and legitimacy of the narratives presented within CRT, highlighting tensions between subjective experiences and objective truth (Bridges, 2019).

The transfer of CRT into the mental health field introduces complex layers of perspectives and opinions, particularly when considering how graduate students in mental health development are impacted by their own identities and intersecting identity layers, as well as those of the individuals to whom they will provide services. Navigating these dynamics can be challenging, especially when heightened by possible increased anxiety. Understanding how CRT is critiqued in this context underscores the importance of acknowledging and addressing the concept of multifaceted identity and its influence on both providers and recipients of mental health services. This recognition is essential for

fostering effective and culturally sensitive approaches to mental health care that acknowledge the diverse experiences and perspectives of all involved.

CRT may contribute to anxiety by constantly highlighting racial disparities and discrimination, leading to increased stress and fear among marginalized communities. The emphasis on systemic racism and discrimination may exacerbate feelings of hopelessness and powerlessness, contributing to anxiety and other mental health issues. Moreover, the focus on racial identity and experiences of oppression may lead to heightened race-based anxiety, where individuals anticipate rejection or discrimination based on their racial identity. This can particularly affect minority groups who already face discrimination and prejudice, leading to negative psychological outcomes such as anxiety and depression.

On the other hand, CRT can lead to understanding and addressing mental health disparities. By recognizing the intersectionality of various social identities, including race, gender, and class, CRT provides a comprehensive framework for understanding how multiple forms of oppression intersect to impact mental health outcomes. This understanding can inform culturally responsive mental health interventions that address the unique needs and experiences of marginalized communities. Additionally, CRT advocates for social justice and equity, which are essential for promoting mental well-being and reducing stressors related to discrimination and systemic oppression.

However, understanding intersectionality can exacerbate mental health disparities by highlighting the complex forms of oppression experienced by minority individuals. Also, understanding the impact of discrimination based on race, gender, sexuality, and

other intersecting identities can lead to heightened stress, anxiety, and depression. Furthermore, individuals who belong to multiple marginalized groups may face unique challenges in accessing mental health care and support, further exacerbating mental health disparities. Alternatively, the advantage of intersectionality provides a crucial framework for understanding and addressing mental health disparities. By recognizing the intersecting forms of oppression experienced by individuals, intersectionality highlights the need for a specific and culturally responsive mental health interventions for different minorities. Therefore, recognizing and acknowledging the unique experiences and needs of marginalized communities may lead to more effective and equitable mental health care. Additionally, intersectionality emphasizes the importance of addressing social determinants of health, such as poverty, discrimination, and access to resources, which are essential for promoting mental well-being.

Addressing anxiety within mental health settings using related CRT to provide support, resources, and strategies can help individuals navigate the complexities of confronting racism and systemic inequalities. Providing psychoeducation for a comprehensive understanding of CRT, including its principles, history, and implications, can help individuals gain a deeper understanding and alleviate some of the anxiety associated with uncertainty or lack of knowledge. Teaching mindfulness techniques, relaxation exercises, and stress reduction strategies can help individuals manage anxiety symptoms and cultivate resilience in the face of racial stressors. In addition to using cognitive behavioral therapy techniques to help challenge negative thought patterns and develop effective coping mechanisms to address their anxiety related to CRT, affirming

individuals' cultural identities and validating their experiences of racism and discrimination can help reduce feelings of isolation and alienation, which are common sources of anxiety.

Future Directions and Research Gaps

Research in this area will need to focus on how these topics impact students' anxiety levels due to the social conflicts and avoidance around discussions of race caused by systemic racism, which perpetuates the unconscious bias of graduate school programs, curricula, and the broader mental health field. The need for a deeper understanding of the relationship between the bases of CRT and anxiety among graduate psychology programs was at the core of this study. This focus can help address the systemic challenges and perspectives that lead students to experience possible symptoms of anxiety due to the lack of programmatic support within the system, which does not allow them to feel safe exploring these topics in classroom settings. Future studies and interventions should continue to focus on understanding the types of symptoms students in graduate psychology programs experience in classroom settings. Furthermore, encouraging students to acknowledge the importance of recognizing potential symptoms and addressing their biases through appropriate channels of mental health services and psychoeducation may lead to professionals becoming more aware of the impact of their emotions and possible biases around topics of racism.

Summary and Conclusions

The research focus in this study was on CRT and anxiety as they related to the impact on graduate students from minority backgrounds and the broader community

working under the paradigm of White privilege. In addition, the literature evaluated how faculty members are challenged by the structures of racism within their programs and their supervision of students in professional development. The literature findings addressed how intersectionality considers various aspects of identity, such as race, gender, and class, and their impact on mental health experiences. Discrimination based on multiple aspects of identity often leads to heightened mental health challenges, particularly among marginalized groups.

CRT exposes racial disadvantages and systemic racism experienced by minority groups, which affect mental health, academic success, and social inclusion. It addresses issues such as color-blind ideology, cultural appropriation, and the normalization of racism within institutions. CRT also highlights racial disparities in education systems, including funding inequalities and racial isolation in schools. It advocates for a comprehensive understanding of history and race in educational settings to address systemic injustices and promote inclusivity. CRT emphasizes recognizing and confronting racism within mental health organizations and clinical practices, underscoring the importance of cultural competence in addressing racial challenges to provide effective mental health services to diverse populations.

The relationship between CRT and anxiety stems from the intersectionality within each individual's reality and how, within the system of White privilege, each person is impacted differently, sometimes leading to mental health symptoms. Furthermore, these mental health symptoms not only affect populations receiving mental health services but also impact graduate psychology students from minority groups as they prepare to

become psychologists under pressures of assimilation or isolation from the majority. Understanding and addressing racial biases and discrimination in mental health services is essential for providing equitable care. However, limitations in training and awareness among mental health professionals risk harming those receiving services, especially minority clients.

The independent, dependent, and covariate variables discussed in the literature are directly relevant to addressing the RQs. RQ1 was as follows: To what extent do motivational factors, as measured by the Color-blind Racial Attitudes Scale (CoBRAS), predict anxiety level among graduate psychology students when discussing racial topics? The independent variable of motivating factors towards challenges expressing diversity aligned with this RQ, as it examines factors that contribute to difficulties in expressing diversity, such as unawareness of racial privilege, institutional discrimination, and blatant racial issues. The literature suggests that these factors, grounded in CRT, perpetuate racial inequalities and experiences of privilege and oppression. The dependent variable of levels of anxiety is also directly relevant to this RQ, as the literature has highlighted the relationship between experiences of racial discrimination, racial battle fatigue, and increased anxiety among graduate students, particularly those from underrepresented groups. RQ2 was as follows: Does the racial background of graduate psychology students moderate the relationship between motivational factors and anxiety levels when discussing racial topics? The dependent variable of levels of anxiety was again pertinent to this RQ, as the literature has suggested that race-based anxiety and anticipation of rejection due to racial minority status contribute to heightened anxiety and depression.

The covariate of demographic variables such as race/ethnicity was particularly relevant to this RQ, as intersectionality theory highlights how various marginalized identities, including race, intersect with power systems to create unique experiences of systemic inequity and oppression, leading to more pronounced mental health effects.

Chapter 3: Research Method

Introduction

The study was a quantitative study with the aim of identifying whether motivating factors that lead to challenges expressing diversity predict anxiety levels when discussing racial topics in graduate psychology students. According to Bridges (2019), the definitions regarding topics of race may show a lack of intentionality, neutrality and lack of responsibility by the institutions that reinforce racism. Therefore, exploring the relation that anxiety had to these topics within the field of psychology can help form new ways of educating students (and eventually professionals) to acknowledge the difficult topics even in moments of high anxiety and tension.

The data gathered in this research may help graduate programs address awareness of racial topics among the students. The literature has indicated that students often avoid recognizing racism to avoid the possible anxiety and discomfort of these conversations and the need to appear to be a good person. The independent variable was the motivating factors towards challenges expressing diversity, which were divided into three categories that would be identified within the scale as unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues.

The dependent variable was anxiety levels, measured continuously using the PROMIS Anxiety scale. This approach allowed for the examination of how the identified motivational factors contribute to varying levels of anxiety during discussions of racial realities. Therefore, studying the motivational factors that led to avoidance of racial realities in and out of graduate programs, and exploring how race moderate the

relationship between these factors and anxiety levels, may help students develop an introspective view and work through the anxiety when engaging in these important conversations.

Research Design and Rationale

The study used a quantitative methodology through a survey with a nonexperimental design and nonprobability sampling to assess the relationships between the variables of interest. Quantitative survey research was particularly well-suited for this investigation because it enables the measurement of variables using established, valid instruments, such as the PROMIS Anxiety scale, which captures anxiety levels on a continuous scale. The motivating factors for challenges in expressing diversity were measured through a structured scale that identified three distinct categories: unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues. The choice of a quantitative design ensured the precision and objectivity required to analyze the relationships between these variables.

The study focused on the relationship between motivational factors related to challenges in expressing diversity (as measured by the CoBRAS) and anxiety levels (assessed with the PROMIS Emotional Distress Anxiety Short Form) among graduate psychology students. Additionally, race was examined as a potential moderating variable. These constructs were best assessed quantitatively using validated instruments that provide reliable, objective data. Quantitative methods allowed for precise measurement and statistical analysis, which are critical for testing hypotheses and drawing data-driven conclusions.

The choice of a nonexperimental design reflected the exploratory nature of this research, which sought to observe naturally occurring relationships between variables without manipulating them. This approach was appropriate given the study's focus on understanding correlations and moderation effects rather than establishing causality. The use of established scales, such as the CoBRAS and PROMIS Anxiety Short Form, ensured that the constructs were measured reliably, enhancing the validity of the findings.

In summary, the quantitative survey design was chosen because it aligns with research designs that advance knowledge in psychology, particularly when assessing relationships between variables using validated instruments. This design enabled the generation of reliable, generalizable insights that may inform educational practices and interventions, contributing to the field's understanding of the psychological impacts of diversity-related challenges in graduate education.

Methodology

Population

The population of interest for this research was graduate students enrolled in psychology programs across the United States, including those in U.S. territories that are overseas. These programs were offered online, on-campus, or in a hybrid format. Participants pursued a range of specializations, including clinical practice, research, and more. The population size for this study was estimated to include 74 participants, determined based on the power analysis conducted. For example, in psychology master's programs, 18% of students identify as Black, 14% as Hispanic, and 52% as White (American Psychological Association, 2023).

Sampling and Sampling Procedures

Participants were recruited through various means such as university participant pools, direct contact, and internet surveys, leveraging academic networks to facilitate snowball sampling whereby initial participants referred others.

The inclusion criteria encompassed graduate students currently enrolled in psychology programs across the United States and territories at the master's or doctoral level, or those who had graduated within the past year, demonstrated proficiency in English, and had access to the internet to complete the survey.

The exclusion criteria included students not enrolled in or recently graduated from a psychology program, individuals who are not within United States or territories, and those personally acquainted with the researcher or who had discussed the study with the researcher, to prevent response bias. Additionally, students who did not meet the inclusion criteria or failed to provide informed consent were excluded.

A power analysis was conducted to determine the sample size for this research using GPower, a widely recognized tool in social sciences research, to ensure the study was adequately powered to detect significant effects. In a model utilizing linear multiple regression with a fixed model and a single regression coefficient, an a priori analysis was conducted. GPower parameters included an effect size (f^2) of 0.15, an alpha error probability (α) of 0.05, and a desired statistical power ($1-\beta$) of 0.95, with two predictors. The output indicated a noncentrality parameter (δ) of 3.3316662, a critical t-value of 1.6665997, degrees of freedom (df) of 71, a total sample size of 74, and an actual power of 0.9510185. Thus, the target sample size for the study was 74.

Procedures for Recruitment, Participation, and Data Collection

Participants were recruited through multiple methods, including recruitment emails distributed through university participant pools, announcements posted on online platforms and forums for graduate students, and direct invitations via email to potential participants identified through academic networks. The link provided access to the consent form and survey through Google Forms, an online platform used for data collection. Recruitment materials, which included detailed information about the study's purpose, inclusion criteria, and instructions for accessing the survey.

Participants accessed the study through a unique link to an online survey platform. Before beginning the survey, they were directed to an informed consent page that outlined the study's purpose, procedures, potential risks, and their rights as participants. Participants indicated their consent by selecting a checkbox before proceeding to the survey. The survey consisted of the CoBRAS, the PROMIS Emotional Distress Anxiety Short Form, and a demographic questionnaire.

For the CoBRAS, participants first read an introduction explaining that the scale measured attitudes toward race and diversity. Clear instructions guided participants on how to respond to items, such as rating their agreement with statements on a Likert scale. Each item was presented sequentially on the survey platform. An example item from the CoBRAS was, "I believe that race should not be a factor in hiring decisions." Participants rated their level of agreement with similar statements.

For the PROMIS Emotional Distress Anxiety Short Form, participants were introduced to the purpose of the scale, which was to measure anxiety-related symptoms.

Instructions directed participants to rate the severity of their anxiety symptoms on a Likert scale. Items were also presented one at a time on the survey platform. An example item from the PROMIS scale was, “I felt nervous.” Participants rated their responses while reflecting on a time in class when they discussed issues focused on race or diversity. Their responses captured the thoughts and feelings they experienced at that time. To screen for inclusion criteria, the first section of the survey contained eligibility questions. If a participant did not meet the inclusion criteria, they were instructed to stop the survey and were thanked for their interest. Participants were not required to return for any follow-up procedures. No additional interviews or treatments were planned as part of this study.

Instrumentation and Operationalization of Constructs

The CoBRAS was developed by Gushue et al. (2017), was used to measure attitudes reflecting unawareness of racial privilege, institutional discrimination, and blatant racial issues. Published reliability coefficients range from 0.74 to 0.91, with validity established through prior studies on color-blind racial attitudes. An example item from the CoBRAS is, “I believe that social policies, such as affirmative action, discriminate unfairly against White people.” Permission to use the CoBRAS was obtained and included in Appendix A.

The PROMIS Emotional Distress Anxiety Short Form was developed by Pilkonis et al. (2011) was used to assess levels of anxiety using a clinically validated scale. Published reliability coefficients exceed 0.90. Construct validity for the PROMIS scale has been established through comparisons with other established anxiety measures,

demonstrating high correlations that confirmed it effectively assessed anxiety levels. An example item from the PROMIS scale was, “I felt fearful.” Permission to use the PROMIS scale was obtained and included in Appendix B.

Motivational factors were measured using the CoBRAS. Scores were calculated based on responses to items on a Likert scale, with higher scores indicating greater unawareness of racial issues. Anxiety levels were measured using the PROMIS Emotional Distress Anxiety Short Form. Scores represented the severity of anxiety symptoms, categorized as none, mild, moderate, or severe. Race was captured through a demographic questionnaire, coded as categorical data to explore moderation effects. Racial background, collected through the demographic questionnaire (see Appendix C), served as a moderator in the analysis of the relationship between motivational factors and anxiety.

The PROMIS Emotional Distress Anxiety Short Form

The PROMIS Emotional Distress Anxiety Short Form was a validated tool designed to measure symptoms of anxiety-related emotional distress, such as worry, fear, and hyperarousal. Cella et al. (2010) described the development of PROMIS as part of a larger initiative to create standardized item banks for assessing health outcomes using item response theory (IRT). This short form contains seven items, each rated on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). Scores were summed to generate a total score, with higher scores indicating greater levels of anxiety. Pilkonis et al. (2011) further refined the item banks through comprehensive item evaluations and demonstrated their validity across clinical and general populations.

Reliability statistics for the PROMIS Emotional Distress Anxiety Short Form were robust, with internal consistency (Cronbach's alpha) exceeding 0.90. Validity has been demonstrated through strong correlations with other established anxiety measures. Participants were expected to complete the PROMIS scale in approximately 3-5 minutes, making it a brief yet comprehensive tool for assessing anxiety symptoms.

CoBRAS

The CoBRAS was used in this study to assess participants' levels of color-blind racial attitudes, specifically focusing on unawareness of racial privilege, institutional discrimination, and blatant racial issues. The CoBRAS consists of 20 items rated on a 6-point Likert scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating stronger endorsement of color-blind racial attitudes. The measure includes three subscales: unawareness of racial privilege, unawareness of institutional discrimination, and unawareness of blatant racial issues.

The CoBRAS had demonstrated strong psychometric properties, with internal consistency reliability coefficients ranging from 0.78 to 0.91 across diverse populations (Neville et al., 2000). Construct validity has been established through correlations with related measures, including attitudes toward systemic racism and diversity. Participants completed the CoBRAS online as part of a secure survey platform. Each item was presented sequentially with clear instructions, and an example item includes, "I believe that social policies, such as affirmative action, discriminate unfairly against White people." The estimated time to complete the CoBRAS was 5-7 minutes.

Data Analysis Plan

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS). The following procedures were performed. Data cleaning and screening involved checking for incomplete or invalid responses, with missing data addressed using mean imputation where appropriate. Descriptive statistics summarized demographic characteristics and key variables. Inferential statistics initially included correlation and multiple regression analyses to examine the relationship between motivational factors (independent variables) and anxiety levels (dependent variable). Moderation analyses were also conducted to explore whether race moderated the relationship between motivational factors and anxiety.

The analysis addressed two RQs. The first RQ investigated whether specific motivational factors, as measured by the CoBRAS, predicted anxiety levels in graduate psychology students. Pearson correlation and multiple regression analyses were conducted to examine these relationships. The second RQ explored whether the racial background of participants moderated the relationship between motivational factors and anxiety levels. Moderation analyses were conducted for each racial group separately.

RQ1: To what extent do specific motivational factors, as measured by the Color-Blind Racial Attitudes Scale (CoBRAS), predict anxiety levels in graduate psychology students when discussing racial topics?

*H*₀1: Specific motivational factors, as measured by the CoBRAS, do not significantly predict anxiety levels in graduate psychology students when discussing racial topics.

*H*₁₁: Specific motivational factors, as measured by the CoBRAS, significantly predict anxiety levels in graduate psychology students when discussing racial topics.

RQ2: Does the racial background of graduate psychology students moderate the relationship between specific motivational factors and anxiety levels when discussing racial topics?

*H*₀₂: The racial background of graduate psychology students does not moderate the relationship between specific motivational factors and anxiety levels when discussing racial topics.

*H*₁₂: The racial background of graduate psychology students moderates the relationship between specific motivational factors and anxiety levels when discussing racial topics.

Prior to conducting the regression analyses, the assumptions for multiple linear regression were assessed using standard procedures in SPSS. Linearity between the independent and dependent variables was visually inspected through scatterplots. Independence of residuals was evaluated using the Durbin-Watson statistic. Homoscedasticity, or constant variance of residuals, was assessed visually rather than through the Breusch-Pagan test, which was initially proposed but not supported within the available SPSS interface during the conducted analysis. Similarly, normality of residuals was evaluated using P-P plots; although the original plan included the Shapiro-Wilk test, this test is more commonly used in small-sample hypothesis testing for individual variable distributions rather than assessing normality of residuals in a regression model. Therefore, a visual inspection of the P-P plot was deemed more

appropriate in this context. Multicollinearity among predictors was examined using variance inflation factors (VIFs), ensuring that no excessive correlation existed between the independent variables. Outliers and influential data points were identified using Mahalanobis distance, Cook's Distance, and leverage values. While some originally proposed statistical tests were not utilized, the assumptions were evaluated using commonly accepted and statistically valid alternatives that aligned with both the software capabilities and the nature of the dataset. These methodological adjustments ensured that the analyses were still rigorous and interpretable, while also acknowledging the limitations and exploratory nature of the study.

The statistical analysis included computation of Pearson's correlation coefficients to assess the strength and direction of relationships between the study variables. Although the multiple regression analysis to examine the unique contributions of each motivational factor to anxiety levels, the analysis was modified due to limitations related to assumption violations and sample characteristics. Specifically, linearity, normality, and homoscedasticity assumptions were not fully met, and the sample size restricted the stability and generalizability of the regression model. As a result, the regression analysis was conducted with caution and framed within an exploratory context. The inclusion of demographic covariates (age and gender) in the regression model was initially planned but ultimately not pursued, as the limitations in statistical power and model validity reduced the utility of such adjustments. Additionally, procedures such as the Bonferroni correction for multiple comparisons were not applied, as the final analyses did not include a large number of statistical tests.

Given the small and uneven sample sizes across racial subgroups, racial categories were collapsed into broader groups (Black/African American, Hispanic/Latino, and White/Caucasian) to support moderation analysis. Other racial categories, such as Multiracial, Asian, and Native American, were excluded from the moderation models due to insufficient sample sizes, which limited the reliability and interpretability of subgroup analyses for those groups. This decision was made to enhance the statistical stability of the models and to reduce the risk of spurious findings caused by low group counts. Moderation models were conducted separately for each group using interaction terms to examine whether racial identity moderated the relationship between color-blind racial attitudes and anxiety. The significance threshold for all tests was set at $\alpha = 0.05$. Results were interpreted using regression coefficients, confidence intervals, and p-values.

Threats to Validity

External Validity

The external validity refers to the extent to which findings can be generalized to a broader population. In this study, external validity may have been affected by the researcher not being present during the completion of the instruments, which prevented participants from seeking clarification on questionnaire items. Additionally, there was a possibility of social desirability bias influencing how participants responded to items. This potential bias was mitigated by collecting data anonymously through an online platform, reducing pressure for participants to respond in socially expected ways.

Internal Validity

The internal validity refers to the extent to which observed relationships between variables can be attributed to the variables themselves rather than to extraneous factors. In this study, participants completed the instruments in self-selected environments, which introduced potential distractions and uncontrolled conditions that could have affected their responses. The heightened societal sensitivity regarding racial topics at the time of data collection may have further influenced how participants responded, potentially increasing the likelihood of biased or emotionally influenced answers. Experimental mortality was a potential threat, particularly if participants failed to complete both instruments fully or attentively. There was also a possibility of regression to the mean, a statistical phenomenon in which participants who initially reported extreme anxiety levels may have subsequently provided more moderate responses. This shift would not necessarily reflect a true change in anxiety, but rather a natural tendency for unusually high or low scores to move closer to the average. Although participants completed the anxiety measure only once, the presence of extreme scores in a small sample can still introduce variability that may distort the accuracy of conclusions drawn from the data.

Construct Validity

Construct validity refers to the degree to which the instruments accurately measured the intended psychological constructs. The PROMIS Emotional Distress Anxiety Short Form has established construct validity through previous research that demonstrated strong correlations with other well-validated anxiety measures. Likewise, the CoBRAS had undergone validation processes showing its effectiveness in measuring

unawareness of racial privilege, institutional discrimination, and blatant racial issues. Both measures were selected due to their established reliability and construct validity, which supported the appropriateness of their use in this study.

Statistical Conclusion Validity

Statistical conclusion validity concerns the accuracy of inferences made from statistical analyses. A power analysis was conducted to determine the minimum sample size needed to reduce the likelihood of Type II errors. However, threats to statistical conclusion validity remained due to assumption violations (linearity, homoscedasticity) and small subgroup sample sizes, which limited the power of the moderation analyses. The statistical tests conducted and modifications were made to the analysis plan (collapsing racial categories) to strengthen the interpretability of the results despite these limitations.

Ethical Procedures

The research involved minimal risk to participants. Participants accessed the informed consent document before proceeding to the online survey via Google Forms. The consent form informed them of the purpose of the study, their rights as participants, and the potential risks associated with participation. Participation was entirely voluntary, and participants could withdraw from the study at any time without penalty. The study was conducted anonymously; no identifying information such as names or IP addresses was collected. Participants were advised to ensure their own privacy while completing the questionnaires in their personal settings. There was a potential risk of psychological distress due to the sensitive nature of questions about race and anxiety. Participants were

informed that they could stop completing the survey at any time if they experienced discomfort.

This study was reviewed and approved by Walden University's Institutional Review Board (IRB approval #04-01-25-0747309). The study fell under Walden's pre-approved Anonymous Survey Manual, which permitted the collection of anonymous survey data. Recruitment and consent procedures strictly followed the pre-approved template, with the consent form. IRB approval remains valid until March 31, 2026, unless extended through continuing review.

All data were stored securely on an external hard drive. Only the primary researcher and the dissertation committee had access to the raw data. Data were collected anonymously and will be permanently deleted 5 years after the completion of the research, in accordance with institutional guidelines and ethical standards.

Summary

Chapter 3 outlined the quantitative research design used to examine how motivational factors related to challenges in expressing diversity were associated with anxiety among graduate psychology students. The study utilized the CoBRAS and the PROMIS Emotional Distress Anxiety Short Form. A nonexperimental, cross-sectional survey design was employed using nonprobability sampling methods. Participants were recruited from psychology programs across the United States, and data were collected anonymously via an online platform. The data were analyzed using descriptive statistics, correlation analysis, and multiple linear regression procedures. Moderation analyses were also conducted to examine whether racial background influenced the relationship

between motivational factors and anxiety levels. This methodological approach was developed after consulting with a statistician and adapted to address sample limitations and unmet statistical assumptions. The findings from this study aimed to inform graduate training programs on how to better support students in managing discomfort and anxiety when engaging in conversations about race, with the broader goal of fostering more inclusive and equitable educational environments.

Chapter 4: Results

Introduction

The purpose of this study was to examine whether specific motivational factors related to challenges in expressing diversity, as measured by the CoBRAS, predicted anxiety levels in graduate psychology students when discussing racial topics. In addition, the study explored whether students' racial backgrounds moderated the relationship between these motivational factors and levels of anxiety.

The following RQs and hypotheses guided the study:

RQ1: To what extent do specific motivational factors, as measured by the Color - Blind Racial Attitudes Scale (CoBRAS), predict anxiety levels in graduate psychology students when discussing racial topics?

H₀₁: Specific motivational factors, as measured by the CoBRAS, will not significantly predict anxiety levels in graduate psychology students when discussing racial topics.

H₁₂: Specific motivational factors, as measured by the CoBRAS, will significantly predict anxiety levels in graduate psychology students when discussing racial topics.

RQ2: Does the racial background of graduate psychology students moderate the relationship between motivational factors and anxiety levels when discussing racial topics?

H₀₂: The racial background of graduate psychology students will not moderate the relationship between specific motivational factors and anxiety levels when discussing racial topics.

H₁₂: The racial background of graduate psychology students will moderate the relationship between specific motivational factors and anxiety levels when discussion racial topics.

This chapter presents the results of the statistical analyses conducted to address these questions, beginning with descriptive statistics and assumption testing, followed by analyses of each RQ and relevant exploratory findings.

Data Collection

This section describes how data were collected, participant characteristics, and the adjustments made to the original analytic plan. Data was collected over a 3-week period in April 2025 using Google Forms. Recruitment occurred through university participant pools, direct contact with students, and online/social media platforms where the survey link was distributed. A total of 93 students accessed the survey, and all 93 completed responses were retained for analysis, yielding a 100% completion rate.

As outlined in Chapter 3, the original analytic plan included regression and moderation analyses across multiple racial subgroups. However, during data collection it was noted that several subgroups were too small to meet statistical assumptions. For the purpose of moderation analyses, racial subgroups were therefore collapsed into broader categories to ensure adequate group size for statistical testing. Specifically, participants who identified as African American or Black were combined into a single Black/African

American group, those who identified as Hispanic or Latino/a were combined into a Hispanic/Latino/a group, and those who identified as Asian or Asian American were combined into an Asian/Asian American group. Participants who identified as White or Caucasian were retained as a separate White group.

Because the White/Caucasian group was substantially larger ($n = 39$) than all other racial groups combined, and several smaller categories (Native American, Multiracial, Other, Prefer not to say) contained too few participants for reliable subgroup analyses, moderation analyses were conducted using a subset of non-White participants ($n = 48$). This approach allowed the examination of relationships among racially diverse groups without the disproportionate influence of the majority group. The full dataset ($N = 93$) was retained for all descriptive and correlational analyses.

The demographic data for the sample ($N = 93$) is presented in Table 1. The sample included the races White/Caucasian (42%), Latino/a or Hispanic (18%), Black or African American (20%), Multiracial (8%), Asian (7%), and Other (5%). Approximately 78% of the sample identified as female, and individuals from both master's and doctoral programs were included.

Table 1*Demographic Characteristics of the Full Sample (N=93)*

Race	Gender	Frequency	Valid percent
African American	Male	2	25.0
	Female	6	75.0
	Total	8	100.0
Asian	Female	2	100.0
	Total	2	100.0
Asian American	Male	2	40.0
	Female	3	60.0
	Total	5	100.0
Black	Male	1	9.1
	Female	10	90.9
	Total	11	100.0
Caucasian	Non-binary/Third gender	1	100.0
	Total	1	100.0
Hispanic	Female	7	100.0
	Total	7	100.0
Latino/a	Male	2	20.0
	Female	8	80.0
	Total	10	100.0
Multiracial	Male	1	14.3
	Female	6	85.7
	Total	7	100.0
Native American	Female	1	100.0
	Total	1	100.0
White	Male	4	10.3
	Female	31	79.5
	Non-binary/Third gender	4	10.3
	Total	39	100.0
Prefer not to say	Female	2	100.0
	Total	2	100.0

Note. $N = 93$. Percentages may not add to 100 due to rounding.

After collapsing racial categories for analytic purposes, the moderation analyses were conducted using a subset of non-White participants ($n = 48$), while the full sample ($N = 93$) was retained for descriptive and correlational analyses. Table 2 summarizes the race distribution, and Table 3 presents the gender distribution for the analytic subset.

These adjustments represent a minor modification from the original plan outlined in Chapter 3, which anticipated analyses across all reported racial categories; however, they were necessary to ensure statistical stability and interpretability of subgroup comparisons.

Table 2

Racial Distribution of Participants in the Analytic Subset (n=48)

Race	Gender	Frequency	Valid percent
African American	Male	2	25.0
	Female	6	75.0
	Total	8	100.0
Asian American	Male	2	40.0
	Female	3	60.0
	Total	5	100.0
Black	Male	1	9.1
	Female	10	90.9
	Total	11	100.0
Hispanic	Female	7	100.0
	Total	7	100.0
Latino/a	Male	2	20.0
	Female	8	80.0
	Total	10	100.0
Multiracial	Male	1	14.3
	Female	6	85.7
	Total	7	100.0

Note. $N = 48$. The sociodemographic gender table includes racial classifications that were retained for moderation analyses, specifically African American/Black, Asian/Asian American, Hispanic/Latino/a, and Multiracial categories. The White/Caucasian group, although larger in size, was not included in the moderation subset because it represented the majority group and was analyzed separately in descriptive analyses.

Table 3*Gender Distribution of Participants in the Analytic Subset (n=48)*

Race	Gender	Frequency	Valid percent
Black	Male	3	15.8
	Female	16	84.2
	Total	19	100.0
Asian	Male	2	28.6
	Female	5	71.4
	Total	7	100.0
Latino/ a	Male	2	11.8
	Female	15	88.2
	Total	17	100.0
Multira cial	Male	1	14.3
	Female	6	85.7
	Total	7	100.0

Note. $N = 48$. The sociodemographic gender table reflects the racial groupings used for the moderation analyses, which included Black/African American, Asian/Asian American, Hispanic/Latino/a, and Multiracial categories. To ensure adequate group sizes for statistical testing, closely related racial classifications were combined: African American with Black, Asian American with Asian, and Hispanic with Latino/a. The White/Caucasian group, although larger in size, was analyzed separately in descriptive analyses and therefore is not included in this table.

In terms of external validity, the sample was broadly consistent with national APA data on graduate psychology programs. For example, APA reports indicate that psychology graduate students in the United States are predominantly White (approximately 52%), with smaller proportions of Black (18%) and Hispanic (14%) students. Compared to these figures, the current study slightly underrepresented White students and slightly overrepresented Black students, while Hispanic student

representation was comparable. These differences limit the generalizability of the findings but still provide meaningful insights into the experiences of racially diverse graduate psychology students.

Finally, preliminary univariate analyses were conducted to evaluate potential covariates, meaning that demographic variables were individually tested to see if they were significantly related to anxiety scores. This step helped determine whether certain factors, such as age or gender, needed to be included as control variables in the final models. Results indicated that neither age nor gender was significantly associated with anxiety and were therefore not included as covariates. Results indicated that neither age nor gender was significantly associated with anxiety and were therefore not included as covariates. Specifically, the associations between age and anxiety were nonsignificant across all racial subgroups; Black ($p = .831$), Asian ($p = .566$), Latino/a ($p = .968$), Multiracial ($p = .871$), and White ($p = .622$). Likewise, gender was not significantly related to anxiety for any group; Black ($p = .055$), Asian ($p = .620$), Latino/a ($p = .732$), Multiracial ($p = .147$), and White ($p = .599$). These results confirm that neither age nor gender influenced the dependent variable and therefore were excluded as covariates from the final models. Race, however, was retained as a variable of interest and explored in later analyses.

Results

Descriptive Statistics

Descriptive statistics were computed to characterize the sample and the primary study variables. Participants scored an average of 17.39 ($SD = 7.33$) on the PROMIS

Emotional Distress Anxiety Short Form, indicating mild to moderate levels of anxiety. The mean CoBRAS score was 1.93 ($SD = 0.82$). Reliability analysis indicated high internal consistency for all scales. Cronbach's alpha for the total CoBRAS scale was .93, while subscale reliabilities were also strong: unawareness of racial privilege ($\alpha = .83$), unawareness of institutional discrimination ($\alpha = .85$), and unawareness of blatant racial issues ($\alpha = .82$). All reliability coefficients were greater than the recommended threshold of .70 (Nunnally & Bernstein, 1994), indicating good internal consistency for the measures used in this study.

Descriptive statistics and correlations among the study's main variables for the full sample ($N = 93$) are reported in Table 4, and the corresponding values for the reduced analytic sample ($N = 48$) are presented in Table 5. Correlation analyses revealed no significant association between overall Color-Blindness and anxiety scores in either the full sample ($r = -.011, p > .05$) or the reduced analytic sample ($r = -.182, p > .05$). Effect sizes for these correlations were negligible (Cohen, 1988).

Table 4*Descriptive Statistics and Variable Correlation for the Full Sample (N=93)*

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Color blind	1.933	.815	(.93)				
2. Anxiety	17.385	7.334	-.011	(.96)			
3. Privilege	15.720	7.005	.907**	.042	(.83)		
4. Institutional	13.516	6.772	.911**	-.028	.744**	(.85)	
5. Racial issues	9.237	4.370	.836**	-.030	.759**	.725**	(.82)

Note. $N = 93$. ** $p < .01$; * $p < .05$. M = average; SD =standard deviation. Cronbach's alpha for each scale is presented in parentheses on the diagonal.

Table 5*Descriptive Statistics and Variables Correlations for the Analytic Subset (n=48)*

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Color blind	1.961	.801	(.93)				
2. Anxiety	16.146	6.767	-.182	(.96)			
3. Privilege	16.292	6.719	.935**	-.147	(.83)		
4. Institutional	13.292	5.929	.927**	-.183	.763**	(.85)	
5. Racial issues	9.583	4.533	.931**	-.164	.817**	.829**	(.82)

Note. $N = 48$. ** $p < .01$; * $p < .05$. M = average; SD =standard deviation. Cronbach's

alpha for each scale is presented in parentheses on the diagonal.

Assumption Testing

Prior to regression analyses, statistical assumptions were evaluated. The Durbin-Watson statistic was 1.679, indicating acceptable independence of residuals. In simpler terms, this means that participants' responses were not overly related to one another, which supports the use of regression analysis. Table 6 summarizes the regression assumption checks for both RQ1 and RQ2 models.

Table 6*Assumptions of the Model*

	Evaluation	Score	Point of evaluation	Acceptable
Independence of residuals	Durbin-Watson	1.679	$x > 1$ $y < 3$	Yes
Linearity	Dispersion Graph	N/A	Visually	No
Homoscedasticity	Dispersion Graph	N/A	Visually	No
Normality	P-P Graph	N/A	Visually	No
	Maximum	Average	Point of evaluation	Acceptable
Mahalanobis Distance	15.357	.979	$x < 10$	No
Cook's Distance	1.345	.045	$x < 1$	No
Centered Leverage Value	.327	.021	$x < .083$ a 0.125	No

However, visual inspection of residual scatterplots suggested violations of both linearity and homoscedasticity. This pattern is shown in Figure D1 (RQ1) in Appendix D, which presents the scatterplot of standardized residuals against predicted values for the regression model. This means that the variables should relate to each other in a straight-line pattern, and homoscedasticity means that the spread of the data should be fairly even across values. Violations of these assumptions suggest that the data do not fit the “ideal” pattern regression models assume.

Normality of residuals was also not fully met, as observed in P-P plots. Figure D2 in Appendix D displays the normal probability (P-P) plot of standardized residuals for the regression model, showing noticeable deviations from the diagonal line. The deviations from the diagonal line suggest that the residuals were not normally distributed, limiting

the accuracy of predictions of PROMIS Anxiety from CoBRAS scores. This indicates that the “errors” or leftover variation in the model did not follow the bell-shaped curve, making the results less precise. A scatterplot of standardized residuals against predicted values was created to evaluate the assumptions of the regression model of RQ1. The uneven spread of points suggests that the assumptions of linearity and homoscedasticity were not fully met, indicating that the relationship between CoBRAS scores and PROMIS Anxiety scores may not follow the ideal regression pattern.

These findings indicate that some of the assumptions underlying the moderation model were not fully met. Specifically, although the Durbin–Watson statistic fell within the acceptable range, suggesting that residuals were independent, the scatterplots revealed uneven patterns and curvature that reflected violations of linearity and homoscedasticity. In other words, the relationship between the variables did not follow a perfect straight-line pattern, and the variability of errors was not consistent across predicted values. As a result, the moderation findings should be interpreted with caution, as these issues may have affected the overall model fit.

A scatterplot of standardized residuals against predicted values for the moderation model for RQ2. As shown in Figure D3 (see Appendix D), this plot displays how well the data fit the assumptions required for the analysis. Ideally, the residuals should appear randomly scattered across the graph, forming no clear pattern. However, in this case, the points were widely dispersed and formed uneven patterns, suggesting that the data did not fully meet the assumptions of linearity and homoscedasticity. In plain terms, this means that the relationship among the CoBRAS scores, race, and PROMIS Anxiety scores was

not perfectly consistent or evenly distributed, and the model's results should therefore be interpreted with caution. A normal probability (P-P) plot of standardized residuals was created to evaluate the moderation model for RQ2. As shown in Figure D4 (see Appendix D), the points deviated from the diagonal line, indicating that the residuals were not normally distributed. In simple terms, the data did not follow the expected bell-shaped pattern, suggesting that several regression assumptions were not fully met. Because of these violations, the stability of the moderation estimates may be reduced, and the results should be interpreted with caution.

For the moderation model addressing RQ2, which tested whether race moderated the relationship between CoBRAS scores and PROMIS Anxiety scores, Mahalanobis distance values exceeded recommended cutoffs (maximum = 15.36), Cook's Distance values approached 1.0, and leverage values were greater than .083. These diagnostics are used to identify extreme or influential cases, meaning that a small number of participants' responses may have had an unusually strong influence on the model's results. However, standardized residual analyses showed that none of these cases exceeded conventional thresholds (± 2 , ± 2.5 , or ± 3), suggesting that while a few responses were somewhat influential, no extreme outliers were present.

Table 7 presents a summary of the regression assumption testing, including assessments of multicollinearity, linearity, and homoscedasticity. These results indicated the presence of influential cases, which, in combination with the relatively small sample size, reduced the stability of regression estimates. In addition, due to uneven racial subgroup sizes, several categories were collapsed into broader groups (African American

with Black, Hispanic with Latino/a, Asian with Asian American) to permit moderation analyses. While this adjustment improved feasibility, it further reduced the ability to test certain assumptions robustly across all subgroups. Taken together, the assumption violations and small cell sizes suggest that the regression and moderation results should be interpreted cautiously and considered exploratory. A more detailed summary of assumption testing for the regression model (RQ1) indicated that only one case exceeded ± 2 on standardized residuals, with no cases exceeding ± 2.5 or ± 3 . These values fall within acceptable ranges, suggesting that although one participant's response was somewhat extreme, it did not represent an influential outlier that would compromise the regression model. In simpler terms, none of the participants' responses were unusual enough to meaningfully affect or distort the overall results. Extreme value analysis for the regression model (RQ1) is presented in Table 8.

Table 7*Assumptions of the Adherence Perception Model*

	Evaluation	Punctuation	Point of evaluation	Acceptable
Independence of residuals	Durbin-Watson	1.777	$x > 1$ $y < 3$	Yes
Linearity	Dispersion Graph	N/A	Visually	No
Homoscedasticity	Dispersion Graph	N/A	Visually	No
Normality	P-P Graph	N/A	Visually	No
	Maximum	Average	Point of evaluation	Acceptable
Mahalanobis Distance	14.022	.980	$x < 10$	No
Cook's Distance	.993	.039	$x < 1$	No
Centered Leverage Value	.292	.020	$x < .083$ a 0.125	No

Note. Assumptions for the regression model were evaluated using multiple diagnostics.

Independence of residuals was confirmed (Durbin-Watson = 1.777, acceptable range > 1 and < 3). However, visual inspection of scatterplots and P-P plots indicated violations of linearity, homoscedasticity, and normality. Outlier diagnostics showed potential influential cases, as Mahalanobis distance (14.022), Cook's Distance (.993), and centered leverage values (.292) exceeded recommended thresholds (Mahalanobis < 10 , Cook's Distance < 1 , leverage $< .083$ -.125). These violations suggest that the regression model should be interpreted cautiously.

Table 8*Extreme Values*

	Evaluation	Score	Point of evaluation
Values $x > 2$ or $x < -2$	$x < 5\%$ (12.5)	1	Yes
Values $x > 2.5$ or $x < -2.5$	$x < 1\%$ (3)	0	Yes
Values $x > 3$ or $x < -3$	$x < 0\%$ (0)	0	Yes

Note. Extreme values were evaluated using standardized residual cutoffs. One case

exceeded ± 2 (expected $< 5\%$ of cases), while no cases exceeded ± 2.5 or ± 3 . These values fall within acceptable ranges, suggesting that although one participant's response was somewhat extreme, it did not represent an influential outlier that would compromise the regression model.

RQ1

RQ1: To what extent do specific motivational factors, as measured by the Color-Blind Racial Attitudes Scale (CoBRAS), predict anxiety levels in graduate psychology students when discussing racial topics? To address the first RQ, a Pearson correlation was conducted using the full sample of 93 participants, which included all racial groups, to examine the relationship between color-blind racial attitudes (CoBRAS) and anxiety levels. As shown in Table 4, White/Caucasian participants were retained in the dataset and served as the reference category for later moderation analyses.

The results showed no significant relationship ($r = -.011, p = .922$), meaning that higher or lower CoBRAS scores were not meaningfully associated with levels of anxiety. A subsequent linear regression analysis revealed that CoBRAS scores did not significantly predict anxiety levels ($F(1, 91) = 1.568, p = .217, R^2 = .012$). This result

means that CoBRAS explained only about 1% of the differences in anxiety levels among participants, which is too small to be meaningful.

The unstandardized regression coefficient ($B = -1.533$, $SE = 1.225$, 95% CI [-3.962, 0.896]), indicated that for every one-point increase in CoBRAS, anxiety scores would be expected to decrease by about 1.5 points, but this estimate was not statistically reliable because the confidence interval crossed zero. The standardized coefficient ($\beta = -.182$) also suggested a very small, nonsignificant effect size. In other words, color-blind racial attitudes did not predict anxiety in this sample, and the hypothesis that motivational factors related to unawareness of racial issues would predict anxiety was not supported. Table 9 displays the regression results testing whether CoBRAS scores significantly predicted PROMIS Anxiety scores in the reduced sample. Therefore, the null hypothesis was retained, and motivational factors (as measured by CoBRAS) did not significantly predict anxiety levels in graduate psychology students.

Table 9

Mediation Analysis Between Perception and Adherence Through Anxiety

Variable	B	SE	β	p	R^2	ΔR^2	F	p
Color Blind	-1.533	1.225	-.182	.217	.012	.033	1.568	.217

Note. $N = 48$. ** $p < .01$; * $p < .05$. Dependent variable: Anxiety.

B=Unstandardized B; SE=Standard Error; β =Standardized error; p =significance

level; R^2 =Adjusted R; ΔR^2 =Change in R; F =overall significance of the model;

p =level of significance.

RQ2

RQ2: Does the racial background of graduate psychology students moderate the relationship between motivational factors and anxiety levels when discussing racial topics?

To address the second research question a moderation analysis was conducted to determine whether racial background moderated the relationship between CoBRAS scores and anxiety. Due to small subgroup sizes, racial categories were collapsed into five groups: Black/African American, Latino/a, Asian American, Multiracial, and White/Caucasian. In the regression model, White/Caucasian students were treated as the reference group, meaning their scores provided the baseline for comparison. This decision was based on both statistical and theoretical considerations consistent with the study's methodological design and conceptual grounding in CRT.

From a statistical standpoint, regression models that include categorical variables, such as race, require one category to be designated as the reference group to allow meaningful comparisons among the other subgroups. The White/Caucasian category represented the largest and most statistically stable subgroup within the sample, which reduced the risk of inflated standard errors and unstable estimates that can occur when smaller groups are used as baselines. Using the largest subgroup as the reference category is a standard practice in moderation analysis (Aguinis et al., 2005; Hayes, 2018).

From a theoretical perspective, this decision was also consistent with the study's grounding in CRT. Within CRT and contemporary psychological literature, Whiteness has historically functioned as the normative reference point through which other racial

and cultural identities are defined and evaluated (Delgado et al., 2017; Roberts & Mortenson, 2023). Establishing White participants as the baseline therefore mirrored this sociocultural dynamic, allowing comparisons across racial groups to be interpreted in relation to the dominant racial framework that continues to shape academic and professional spaces. This approach ensured that the quantitative model adhered to accepted statistical conventions while also maintaining theoretical coherence with CRT's goal of interrogating Whiteness as a position of structural and ideological dominance.

Therefore, both methodological and theoretical rationales supported the decision to use White participants as the reference group, maintaining coherence between the analytic approach, the literature reviewed, and the study's conceptual framework. As a result, separate interaction terms were only estimated for the other racial categories (Black, Latino/a, Asian American, and Multiracial).

The overall moderation model was not statistically significant ($F(8, 86) = 1.733, p = .096, R^2 = .168$). This means that, taken together, race did not reliably change the relationship between CoBRAS and anxiety. However, one interaction term, for Black racial identity, was statistically significant ($B = -7.757, SE = 3.313, p = .022, 95\% CI [-14.355, -1.159]$). This coefficient indicates that for Black students, higher CoBRAS scores (greater unawareness of racial issues) were associated with lower anxiety scores. In plain language, Black students who endorsed more color-blind attitudes tended to report less anxiety when discussing race. Results of the moderation analysis examining the interaction of CoBRAS scores with Black racial identity are presented in Table 10. Although the overall moderation model was not statistically significant, a significant

interaction effect was observed for participants identifying as Black. Specifically, higher CoBRAS scores were associated with lower reported anxiety levels within this subgroup, compared to White participants (reference group). No other racial groups demonstrated a statistically significant moderation effect. The figure plots predicted PROMIS Anxiety scores at different levels of CoBRAS scores, allowing a visual comparison of how the relationship between color-blind racial attitudes and anxiety differs for Black students relative to White students, who served as the reference group. As shown, the slope for Black students is negative, indicating that as CoBRAS scores increased, reported anxiety decreased, whereas this pattern was not observed for White students.

Table 10

Moderation Analysis Testing the Interaction Between Color-Blind Racial Attitudes and Black Racial Identity Predicting Anxiety

	B	SE	<i>p</i>	95% Confidence Interval	
				Lower	Upper
Constant	18.422	1.202	0	16.012	20.832
Color Blind	1.956	1.473	0.19	-0.997	4.91
1. Black	-1.833	2.087	0.384	-6.019	2.353
Interaction 1	-7.757	3.476	0.03	-14.728	-0.786

Note. $N = 58$. $**p < .01$; $*p < .05$. Dependent variable: Anxiety. B=Unstandardized B;

SE=Standard Error; p =level of significance.

Interaction terms for other racial groups were not significant: Latino/a ($p = .071$), Asian American ($p = .783$), and Multiracial ($p = .926$). The confidence intervals for these groups all included zero, which means the estimates were not statistically reliable. Effect sizes for these interactions were very small, suggesting that race did not meaningfully

alter the relationship between color-blind attitudes and anxiety for these subgroups.

Results of the moderation analysis examining the interaction of CoBRAS scores with Black racial identity are presented in Table 10. Table 11 presents the moderation analysis results for the Asian American subgroup. Table 12 summarizes the moderation results for the Latino/a subgroup. Results for the Multiracial subgroup moderation model are reported in Table 13.

Table 11

Moderation Analysis Testing the Interaction Between Color-Blind Racial Attitudes and Asian American Racial Identity Predicting Anxiety

	B	SE	<i>p</i>	95% Confidence Interval	
				Lower	Upper
Constant	18.569	1.221	0	16.101	21.038
Color Blind	1.956	1.495	0.198	-1.065	4.978
1. Asian American	-2.515	3.523	0.48	-9.635	4.606
Interaction 1	1.102	4.244	0.796	-7.475	9.68

Note. $N = 46$. $**p < .01$; $*p < .05$. Dependent variable: Anxiety. B=Unstandardized B;

SE=Standard Error; p =level of significance.

Table 12

Moderation Analysis Testing the Interaction Between Color-Blind Racial Attitudes and Latino/a Racial Identity Predicting Anxiety

	B	SE	<i>p</i>	95% Confidence Interval	
				Lower	Upper
Constant	18.57	1.211	0	16.139	21.001
Color Blind	1.956	1.482	0.193	-1.019	4.932
1. Latino/a	-4.786	2.186	0.033	-9.175	-0.397
Interaction 1	-4.275	2.462	0.088	-9.218	0.667

Note. $N = 56$. $**p < .01$; $*p < .05$. Dependent variable: Anxiety. B=Unstandardized B;

SE=Standard Error; p =level of significance.

Table 13

Moderation Analysis Testing the Interaction Between Color-Blind Racial Attitudes and Multiracial Racial Identity Predicting Anxiety

	B	SE	<i>p</i>	95% Confidence Interval	
				Lower	Upper
Constant	18.55	1.284	0	15.957	21.143
Color Blind	1.956	1.572	0.221	-1.219	5.132
1. Multiracial	1.377	3.303	0.679	-5.293	8.047
Interaction 1	-0.262	3.146	0.934	-6.615	6.092

Note. $N = 46$. $**p < .01$; $*p < .05$. Dependent variable: Anxiety. B=Unstandardized B;

SE=Standard Error; p =level of significance.

Post-hoc exploratory analyses refer to additional statistical tests that are conducted after the main analyses, usually to investigate patterns suggested by the data but not specified in the original hypotheses. In this study, post-hoc analyses were used to look more closely at the moderation effect of race by testing each racial subgroup independently. This approach allowed for a more detailed understanding of whether the relationship between CoBRAS scores and anxiety differed within specific groups, beyond what the overall moderation model could show. It is important to note that post-hoc analyses are considered exploratory. They provide useful insights and can identify meaningful patterns, but because they were not part of the original planned analyses, they must be interpreted with caution. The findings from these analyses are best understood as preliminary evidence that can guide future research, rather than definitive conclusions.

The results were consistent with the moderation model: only the Black subgroup showed a statistically significant interaction between CoBRAS scores and anxiety ($B = -$

7.757, $p = .022$). Because White students served as the baseline category, this effect indicates that the pattern of results for Black students differed significantly from White students. In particular, Black students who endorsed higher levels of color-blind racial attitudes reported lower levels of anxiety in conversations about race, while White students did not show this pattern. The overall moderation model with White students as the reference category is summarized in Table 14.

Table 14

Overall Moderation Model Examining Racial Identity as a Moderator of the Relationship Between Color-Blind Racial Attitudes and Anxiety

	B	SE	p	95% Confidence Interval	
				Lower	Upper
Constant	18.588	1.148	0	16.303	20.874
Color Blind	1.956	1.404	0.167	-0.839	4.752
1. Black	-2.492	2.027	0.223	-6.529	1.545
2. Asian					
American	-2.504	3.296	0.45	-9.067	4.06
3. Latino/a	-4.826	2.069	0.022	-8.947	-0.706
4. Multiracial	1.372	2.941	0.642	-4.485	7.229
Interaction 1	-7.757	3.313	0.022	-14.355	-1.159
Interaction 2	1.102	3.985	0.783	-6.834	9.038
Interaction 3	-4.275	2.332	0.071	-8.918	0.368
Interaction 4	-0.262	2.809	0.926	-5.854	5.331

Note. $N = 87$. ** $p < .01$; * $p < .05$. Dependent variable: Anxiety. B=Unstandardized B;

SE=Standard Error; p =level of significance.

For all other racial subgroups, including Latino/a, Asian American, Multiracial, and White (reference group), the moderation effects were not statistically significant. For the smaller subgroups (Latino/a, Asian American, and Multiracial), these non-significant findings were most likely due to the limited number of participants, which reduced

statistical power and made it difficult to detect reliable effects. Although the White group represented the largest subgroup in the sample ($n = 40$) in comparison to the other racial groups, this size still provided only modest statistical power. Therefore, the lack of a significant effect in this group likely reflects both the absence of a strong relationship between CoBRAS scores and anxiety and the overall limited sample size across groups.

These findings highlight the importance of interpreting subgroup effects cautiously. While the Black subgroup demonstrated a significant moderation effect, the lack of similar effects in other groups points to the need for future research with larger and more balanced samples. None of the additional models produced statistically significant moderation effects (all $p > .05$). Effect sizes were small, and confidence intervals were wide, reflecting low stability due to limited subgroup sample sizes.

No additional statistical tests beyond those aligned with the main hypotheses were conducted. Demographic covariates, including age and gender, were examined in preliminary analyses but were not included in the final models because they were not significantly associated with anxiety.

Summary

The purpose of this study was to examine whether motivational factors related to color-blind racial attitudes predicted levels of anxiety in graduate psychology students, and whether racial background moderated this relationship. Two RQs guided the investigation. The first RQ asked whether motivational factors, as measured by the CoBRAS, predicted anxiety levels when discussing racial topics. The second RQ

explored whether students' racial identity moderated the relationship between color-blind attitudes and anxiety.

The results indicated that CoBRAS scores were not significantly associated with anxiety levels in the overall sample. The regression model failed to reach statistical significance, and the effect size was minimal. Therefore, the null hypothesis for RQ1 was retained. Regarding RQ2, the overall moderation model did not reach statistical significance. However, a significant interaction was observed for Black-identifying students, indicating that, compared to White students (the reference group), higher CoBRAS scores were associated with lower reported anxiety in this subgroup. No other racial group showed significant moderation effects.

These findings suggest that, while color-blind racial attitudes did not predict anxiety broadly across the full sample, the relationship may vary by racial identity, particularly among Black students. This highlights the complexity of understanding race-related anxiety in educational contexts and underscores the need to consider sociocultural background when studying and addressing these issues. Chapter 5 will interpret these findings in relation to prior literature and theoretical frameworks, discuss their implications for graduate training and diversity education, outline the study's methodological limitations, and offer recommendations for future research and professional practice.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to examine whether motivational factors related to color-blind racial attitudes predicted levels of anxiety in graduate psychology students, and whether racial background moderated this relationship. Specifically, the study sought to determine whether higher scores on the CoBRAS were associated with higher levels of anxiety as measured by the PROMIS Emotional Distress Anxiety Short Form, and whether racial identity influenced the strength of this relationship. This study was conducted to better understand the emotional responses of graduate psychology students when engaging in discussions about race, with the broader goal of informing diversity training and educational practices within psychology programs.

The regression model accounted for only about 1% of the variance in anxiety, and the effect size. Regarding the second RQ, the overall moderation model, which included the full sample ($N = 93$) with White/Caucasian participants serving as the reference group, was not statistically significant. However, a noteworthy exception emerged within the model: among Black-identifying students, higher CoBRAS scores were associated with lower reported anxiety, a pattern that differed significantly from White students. For Latino/a, Asian American, and Multiracial students, no significant moderation effects were found.

The decision to use White/Caucasian participants as the reference group aligned with both statistical convention and the study's grounding in CRT. From a statistical standpoint, the largest subgroup was selected to ensure stable comparisons (Aguinis et

al., 2005; Hayes, 2018). Theoretically, this approach reflected CRT's recognition that Whiteness often operates as the normative reference point through which other racial identities are evaluated (Delgado et al., 2017; Roberts & Mortenson, 2023). Framing the model in this way enabled the findings for other racial groups to be interpreted in relation to that broader sociocultural context.

Although using White/Caucasian participants as the reference group provided a meaningful theoretical and statistical framework, the relatively small sample size and uneven subgroup representation limited the power of the analyses. These constraints suggest that the significant moderation effect observed among Black students should be interpreted with caution and examined further in future research. It is also important to note that subgroup analyses for smaller racial groups were statistically underpowered due to limited sample sizes, which reduces confidence in the stability of these findings. Therefore, nonsignificant results should be interpreted cautiously, as they may reflect low statistical power rather than the absence of a true effect.

Interpretation of the Findings

This study examined whether motivational factors related to color-blind racial attitudes predicted anxiety in graduate psychology students, and whether racial background moderated that relationship. The findings add nuance to the existing literature and extend the application of CRT in the context of graduate psychology education.

The first RQ asked whether color-blind racial attitudes, as measured by the CoBRAS, predicted anxiety levels. Results indicated no significant association between

CoBRAS scores and PROMIS Anxiety scores in the overall sample. This finding contrasts with earlier studies, such as Gushue et al. (2017), which suggested that anxiety plays a role in sustaining color-blind racial ideologies among White psychology trainees. Similarly, Neville et al. (2013) argued that color-blind racial attitudes minimize awareness of racism and can create discomfort when racial realities are confronted. The lack of a significant relationship in the present study suggests that the link between anxiety and color-blind racial attitudes may be weaker or more context-dependent than previously proposed. It is possible that participants' self-reported anxiety reflected situational classroom experiences rather than underlying attitudinal constructs, or that social desirability influenced responses despite anonymous data collection. In relation to CRT, the nonsignificant findings for RQ1 highlight the complexity of operationalizing constructs like racial ideology and emotional responses in quantitative terms. CRT critiques color-blindness as an ideology that masks systemic racism (Delgado et al., 2017), but the present study found limited evidence that endorsement of such attitudes directly translates into measurable anxiety during race-related discussions. This suggests that CRT may need to be applied alongside other frameworks, such as intersectionality, to capture the layered social and emotional processes involved in classroom contexts.

The second RQ explored whether racial background moderated the relationship between color-blind racial attitudes and anxiety. The overall moderation model was not statistically significant, but an important subgroup effect emerged: Black students who scored higher on CoBRAS reported lower levels of anxiety compared to White students, who served as the reference group. This finding extends the literature by providing

preliminary evidence that the meaning and emotional impact of color-blind racial attitudes may differ across racial groups. Prior research has documented that Black graduate students often experience racial battle fatigue (Ragland Woods, 2021) and heightened stress in predominantly White academic settings (Galán, 2023; Gregus et al., 2020). One possible interpretation is that endorsing color-blind beliefs may function as a coping mechanism for Black students, reducing anxiety by minimizing the salience of racial conflict in classroom discussions. This aligns with CRT's emphasis on how individuals navigate oppressive structures, sometimes by adopting dominant narratives of neutrality and meritocracy as a protective strategy (Bridges, 2019). The significant negative interaction for Black students, however, diverges from expectations in the literature that color-blindness universally perpetuates anxiety and avoidance. Instead, it underscores the importance of considering how marginalized students may strategically engage with or distance themselves from racial discourse to manage psychological stress.

For Latino/a, Asian American, and Multiracial students, no significant moderation effects were detected. These nonsignificant findings are consistent with limitations noted in prior research regarding small subgroup sizes and statistical power in graduate program studies (Wang et al., 2020). They also reflect the diversity of experiences across minoritized groups, suggesting that a single framework may not fully capture how color-blind attitudes intersect with anxiety for all populations. CRT and intersectionality both emphasize the need to account for varied positionalities, and the present study's results support the call for future research that investigates these dynamics in larger, more balanced samples.

Limitations of the Study

Several limitations emerged in the execution of this study that impact the generalizability, validity, and reliability of the findings. First, the sample size posed a significant limitation. While the study's total sample ($N = 93$) exceeded the minimum required by the a priori power analysis for regression, it was not sufficiently large for a moderation analysis involving multiple categorical groups and interaction terms. Prior research emphasizes that detecting interaction effects requires substantially larger samples than detecting main effects, as interaction terms inherently have lower statistical power (Shieh, 2009). Hayes (2018) further noted that moderation models with categorical moderators often demand considerably larger samples to minimize Type II errors and avoid unstable estimates. Aguinis et al. (2005) suggested that sample sizes exceeding 200 participants are often necessary to reliably detect interaction effects across multiple groups. In the present study, the overall moderation analysis was conducted using the full sample ($N = 93$), which included all racial groups, with White/Caucasian participants serving as the reference category. However, because some racial subgroups were much smaller than others, the analysis was statistically underpowered to detect subtle moderation effects. The significant finding observed among Black-identifying students should therefore be interpreted cautiously, as it may reflect instability in the estimates rather than a robust moderating effect. In summary, although the full dataset was used, the uneven distribution of participants across racial categories limited the ability to draw strong or generalizable conclusions about subgroup differences.

Second, the uneven distribution across racial subgroups required collapsing categories (African American with Black, Hispanic with Latino/a, Asian with Asian American) and excluding groups with fewer than two cases. While these adjustments improved the feasibility of analysis, they reduced the ability to examine the unique experiences of smaller racial groups, such as Native American or Asian American students, and limited the representativeness of the findings. In simpler terms, some racial groups were too small to study on their own, which means their unique perspectives could not be captured in the results.

Third, the inclusion of graduate psychology students from U.S. territories, including Puerto Rico, may have influenced the results in ways not fully captured by the analytic model. Experiences of race and racism in Puerto Rico and other territories are shaped by unique sociohistorical, cultural, and political contexts that differ significantly from those in the continental United States. As a result, participants from these territories may have conceptualized and reported race-related attitudes and anxiety differently than participants based in the mainland United States. This contextual variability introduces additional complexity in interpreting the findings and may limit their generalizability across diverse geographic and cultural settings. In simpler terms, students from Puerto Rico and other territories may have thought about and experienced race and anxiety differently from students in the continental United States, which could have influenced the findings.

Fourth, assumption violations in the regression and moderation models posed challenges to the validity of the analyses. Visual inspection of scatterplots suggested

violations of linearity and homoscedasticity, P-P plots revealed deviations from normality, and outlier diagnostics identified potentially influential cases. Although models were still estimated, these issues reduce the stability and trustworthiness of the coefficients and indicate that results should be interpreted as exploratory. Overall, the data did not fit all of the “rules” for regression, which makes the results less stable and more tentative.

Fifth, the study relied exclusively on self-report measures. While both the PROMIS Emotional Distress Anxiety Short Form and the CoBRAS have demonstrated strong psychometric properties in prior research, self-report data are subject to biases such as social desirability and recall inaccuracy. Given the sensitive nature of the questions about race and anxiety, participants may have under- or over-reported their true attitudes and experiences despite anonymity. Additionally, although the PROMIS Anxiety Short Form is a reliable and valid instrument, it was originally designed to measure anxiety as it is experienced in the moment rather than as a recalled emotion. Because the present study asked participants to reflect on their anxiety during prior discussions of race, the instructions were carefully adapted to prompt retrospective self-assessment. This modification was necessary because no existing standardized measure was ideally suited to capture remembered anxiety in this specific context. In simpler terms, because participants reported on their own thoughts and feelings, their answers may not perfectly reflect what they actually experienced.

Six, the cross-sectional design limited the ability to draw causal conclusions. Data were collected at a single point in time, which prevents determining whether color-blind

racial attitudes influence anxiety, whether anxiety influences the endorsement of such attitudes, or whether both are shaped by other contextual factors. Therefore, because the study was done at one point in time, we cannot know which came first, the attitudes or the anxiety.

Finally, the nonprobability convenience sampling method restricted the representativeness of the findings. Participants were recruited from academic networks and online postings rather than random selection. As such, the results may not generalize to all graduate psychology students across the United States and territories. Because participation was anonymous and recruitment occurred through online platforms, specific information about the programs participants were enrolled in or their geographic location within the United States and its territories was not collected. Therefore, the degree of geographic or institutional diversity represented in the sample is unknown, further limiting the generalizability of the findings.

In summary, limitations related to the overall sample size and subgroup imbalance, the instability of interaction estimates, assumption violations, reliance on self-report data, and the cross-sectional design restrict the generalizability and validity of the findings. These constraints highlight the need for future studies to recruit larger and more diverse samples and to use more robust analytic designs when investigating the relationship between color-blind racial attitudes and anxiety in graduate psychology populations.

Recommendations

Future research should recruit larger and more racially diverse samples of graduate psychology students. A larger, more balanced dataset would reduce the need to collapse categories, allow for more stable estimates of moderation effects, and ensure that the perspectives of smaller groups such as Native American, Asian American, and multiracial students are not overlooked. It should also be considered that, because the majority of students enrolled in graduate psychology programs identify as White, the experiences of smaller racial groups may be shaped or constrained by the dominance of this majority. Future studies may benefit from subdividing the White category into more nuanced groups that reflect distinct cultural or ethnic experiences, rather than treating White students as a homogenous category. Future research should expand demographic measures beyond broad racial and gender categories to include more nuanced distinctions (ethnic subgroups within the White category) and explicitly recognize groups such as Middle Eastern and African students. Including variables such as immigration background, cultural identity, and professional aspirations would provide a fuller understanding of how graduate psychology students' sociodemographic context shapes their experiences of race and anxiety.

In addition, future research should examine the unique experiences of students from U.S. territories, such as Puerto Rico. Because race and racism are experienced differently in these contexts due to distinct sociohistorical and cultural factors rooted in colonial and imperial histories, comparative studies could clarify how territorial versus mainland contexts shape the relationship between color-blind racial attitudes and anxiety

(Díaz, 2021). It would also be beneficial to conduct studies exclusively within Puerto Rican graduate psychology programs to better understand how race is perceived in that sociohistorical context. Such research should also consider moderating variables beyond race that may significantly influence students' experiences, such as socioeconomic status, language, or cultural identity. In addition, exploring the experience of race within the United States itself may require studies conducted at the county, state, or regional level, as the composition of samples and the salience of race can vary considerably across different geographic contexts.

Future studies should also address methodological concerns by using quantitative approaches that reduce the influence of social desirability bias. Although validated instruments such as the CoBRAS and PROMIS provide reliable data, participants, particularly graduate psychology students, can be highly educated and well trained in psychology and diversity concepts. Because of this training, they are often aware of socially acceptable responses and may consciously or unconsciously adjust their answers to align with professional or institutional expectations. This response pattern may obscure the true relationship between racial attitudes and anxiety. One potential solution would be to incorporate tasks that measure automatic or unconscious attitudes, such as the Implicit Association Test (IAT). By requiring participants to make rapid judgments, the IAT can capture underlying biases that may not be reported in self-report surveys. Using measures like the IAT alongside traditional instruments could provide a more realistic and nuanced assessment of attitudes and emotional responses, strengthening the validity of future quantitative studies in this area (Greenwald et al., 1998).

Finally, future research should further investigate the subgroup finding for Black students, who reported lower anxiety when endorsing higher color-blind racial attitudes. Replication with larger and more balanced samples is needed to determine whether this reflects a stable pattern or an artifact of limited power. It is also important to recognize that minority students enrolled in graduate psychology programs represent a unique demographic compared to minority populations in the general community. These students are highly educated, have often overcome significant systemic barriers to access graduate training, and may hold professional and personal goals that shape how they navigate racialized conversations in academic spaces. However, it is important to recognize that the Black graduate student population itself is culturally diverse, encompassing individuals from a range of ethnic, regional, and national backgrounds. For the purposes of this study, these distinct identities were combined into a single category to permit statistical analysis, which may have obscured meaningful within-group differences related to culture, lived experience, or social context.

Factors such as socioeconomic background, access to educational opportunities, and professional aspirations may influence how they experience and respond to race-related dialogue. For example, students from underrepresented groups in psychology may perceive the adoption of color-blind attitudes not only as an individual coping strategy but also as a pragmatic way to manage anxiety, fit within predominantly White academic cultures, or protect future career opportunities. Future studies should therefore examine how sociodemographic context, including socioeconomic status, educational

pathways, and career goals, intersects with racial identity to shape the relationship between color-blind racial attitudes and anxiety.

In sum, future research should prioritize recruiting larger and more racially diverse samples, examine territorial contexts such as Puerto Rico and other U.S. regions, incorporate methods that minimize social desirability bias (such as the Implicit Association Test), and further investigate subgroup differences, particularly among Black graduate psychology students. These directions build directly on the current findings while addressing the study's limitations, advancing knowledge of how color-blind racial attitudes and anxiety intersect in graduate psychology education.

Implications

The findings of this study have potential implications for positive social change at the individual, organizational, and societal levels, while also contributing to methodological and theoretical advancements in the study of race, anxiety, and graduate psychology training. At the individual level, the results highlight the importance of understanding how graduate psychology students' attitudes toward race intersect with their emotional experiences in the classroom. For Black students, the significant moderation effect suggests that endorsing color-blind racial attitudes may serve as a coping strategy to reduce anxiety when navigating race-related discussions. Recognizing this pattern can encourage faculty and program leaders to provide support and foster classroom environments where all students feel prepared to engage in challenging conversations about race without relying on defensive coping strategies.

At the organizational and training level, graduate psychology programs can use these findings to inform diversity education and supervision practices. The lack of a significant relationship between color-blind attitudes and anxiety in the overall sample suggests that students may vary widely in how these constructs are connected. Programs can therefore design training curricula that not only introduce students to the risks of color-blind racial ideologies but also explicitly address the emotional responses students may experience when confronting issues of race and equity. This can improve inclusivity in classroom discussions, normalize discomfort as part of learning, and encourage reflective rather than avoidant approaches to difficult conversations.

At the societal and policy level, the findings underscore the complexity of how racial ideologies and emotional experiences interact in academic settings. While color-blind racial attitudes are broadly recognized as limiting awareness of systemic racism, this study suggests that their emotional impact may not be uniform across racial groups. Policymakers and accrediting bodies for psychology programs may consider supporting standards that encourage programs to create structured opportunities for students to practice engaging in racial dialogue, while also providing resources for mental health support. In doing so, the training of future psychologists could more fully prepare them to navigate the realities of racial dynamics in professional practice, thereby promoting more equitable and responsive care.

Methodological implications also emerged from the study. The challenges with sample size and assumption violations reinforce the need for larger and more diverse samples in future quantitative research on moderation effects. By documenting the

instability of subgroup estimates, this study contributes empirical evidence to ongoing discussions about statistical power and the difficulty of detecting interaction effects in smaller samples.

Theoretical implications center on the application of CRT. While CRT critiques color-blindness as an ideology that perpetuates systemic racism, the present findings complicate this narrative by showing that, for Black students, higher color-blind racial attitudes were linked with lower anxiety. This suggests that color-blindness may sometimes function as a short-term coping mechanism in racially charged academic environments. These findings encourage a more nuanced application of CRT that acknowledges how marginalized students may strategically engage with dominant narratives for psychological self-protection, even while those narratives are problematic in broader social contexts.

Recommendations for practice include integrating both cognitive and emotional components into diversity training. The study's results highlighted that, overall, color-blind racial attitudes did not significantly predict anxiety across the full sample, but subgroup differences emerged. Specifically, Black students who endorsed higher color-blind racial attitudes reported lower anxiety, while White, Latino/a, Asian American, and Multiracial students did not show significant moderation effects. These findings suggest that students' experiences of race-related discussions are not uniform, and diversity training should be tailored to acknowledge these differences. Graduate psychology programs may benefit from explicitly addressing the emotional discomfort associated with discussing race, alongside fostering critical awareness of systemic

inequities. For example, reflective exercises could help students explore how their own racial identity and worldview shape their anxiety responses, while structured dialogue can normalize that students from different racial backgrounds may experience and interpret race-related conversations differently. Supervision practices could also be adapted to recognize that for some students, such as those in marginalized groups, endorsing color-blind perspectives may serve as a coping strategy rather than a simple ideological stance. Supervisors and faculty can help students unpack these coping mechanisms safely, guiding them toward more constructive ways of engaging with race without avoidance or defensiveness.

Conclusion

This study examined whether motivational factors related to color-blind racial attitudes predicted levels of anxiety among graduate psychology students, and whether race moderated this relationship. The findings revealed that, overall, color-blind attitudes were not significantly associated with anxiety, although an important subgroup difference emerged: Black students who endorsed higher color-blind attitudes reported lower anxiety compared to White students. These results highlight the complexity of understanding how racial attitudes intersect with emotional responses in educational settings. The study underscores the need for graduate psychology programs to consider both attitudinal and emotional dimensions of diversity training, while also recognizing that the experiences of students may differ across racial groups.

In summary, while the findings should be interpreted cautiously due to sample size and methodological limitations, this study contributes insights that can inform

graduate psychology training, expand theoretical applications of CRT, and guide future empirical work. The potential for positive social change lies in fostering inclusive learning environments, preparing future psychologists to engage in difficult but necessary conversations about race, and ultimately promoting more equitable practices in the field of psychology.

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Appendix A: Permissions for Color-Blind Racial Attitudes Scale (CoBRAS)

From: Paola Giset Garcia Betancourt [redacted]
Sent: Friday, June 10, 2022 11:18 PM
To: Neville, Helen A [redacted]
Subject: Color-Blind Racial Attitudes Scale - Doctoral Candidate

Greetings Dr. Helen Neville,

My name is Paola G. Garcia Betancourt, I am a Doctoral Candidate in Walden University completing my proposal phase of my dissertation. I am interested in using the Color-Blind Racial Attitudes Scale to measure one of my variables for my data collection and already have the utilization request form. My question is if I can send it via email or if the document has to be sent by physical mail.

Thank you for your time,

Respectfully,

Paola G. Garcia Betancourt

[Reply](#) [Forward](#)

Re: Color-Blind Racial Attitudes Scale - Doctoral Candidate

You replied on Sun 6/12/2022 10:24 PM

 Neville, Helen A [redacted]
To: Paola Giset Garcia Betancourt

 Sat 6/11/2022 8:45 AM

Greetings.

No need to send the form. Please feel free to use the scale.

Best of luck with your research



From: Paola [redacted]
Sent: Friday, June 10, 2022 11:18 PM
To: Neville, Helen A [redacted]
Subject: Color-Blind Racial Attitudes Scale - Doctoral Candidate

Greetings Dr. Helen Neville,

My name is Paola G. Garcia Betancourt, I am a Doctoral Candidate in Walden University completing my proposal phase of my dissertation. I am interested in using the Color-Blind Racial Attitudes Scale to measure

Appendix B: Permission for Patient-Reported Outcomes Measurement Information System (PROMIS), Emotional Distress - Anxiety - Short Form

AutoFill can assist with filling out this form.
AutoFill Form X

LEVEL 2—Anxiety—Adult*
***PROMIS Emotional Distress—Anxiety—Short Form**

Name: _____ Age: _____ Date: _____

If the measure is being completed by an informant, what is your relationship with the individual? _____

In a typical week, approximately how much time do you spend with the individual? _____ hours/week

Instructions to patient: On the DSM-5-TR Level 1 cross-cutting questionnaire that you just completed, you indicated that during the past 2 weeks you (individual receiving care) have been bothered by "feeling nervous, anxious, frightened, worried, or on edge", "feeling panic or being frightened", and/or "avoiding situations that make you anxious" at a mild or greater level of severity. The questions below ask about these feelings in more detail and especially how often you (individual receiving care) have been bothered by a list of symptoms during the past 7 days. Please respond to each item by marking ("r" or "a") one box per row.

In the past SEVEN (7) DAYS...						Clinician Use Item Score
	Never	Rarely	Sometimes	Often	Always	
1. I felt fearful.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
2. I felt anxious.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
3. I felt worried.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
4. I found it hard to focus on anything other than my anxiety.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
5. I felt nervous.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
6. I felt uneasy.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
7. I felt tense.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	
Total/Partial Raw Score:						
Prepared Total Raw Score:						
T-Score:						

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Instructions to Clinicians

The DSM-5-TR Level 2—Anxiety—Adult measure is the 7-item PROMIS Anxiety Short Form that assesses the pure domain of anxiety in individuals age 18 and older. The measure is completed by the individual prior to a visit with the clinician. If the individual receiving care is of impaired capacity and unable to complete the form (e.g., an individual with dementia), a knowledgeable informant may complete the measure as done in the DSM-5 Field Trials. However, the PROMIS Anxiety Short Form has not been validated as an informant report scale by the PROMIS group. Each item asks the individual receiving care (or informant) to rate the severity of the individual's anxiety during the past 7 days.

Scoring and Interpretation

Each item on the measure is rated on a 5-point scale (1=never; 2=rarely; 3=sometimes; 4=often; and 5=always) with a range in score from 7 to 35 with higher scores indicating greater severity of anxiety. The clinician is asked to review the score on each item on the measure during the clinical interview and indicate the raw score for each item in the section provided for "Clinician Use." The raw scores on the 7 items should be summed to obtain a total raw score. Next, the T-score table should be used to identify the T-score associated with the total raw score and the information entered in the T-score row on the measure.

Note: This look-up table works only if all items on the form are answered. If 75% or more of the questions have been answered, you are asked to prorate the raw score and then look up the conversion to T-Score. The formula to prorate the partial raw score to Total Raw Score is:

(Raw sum x number of items on the short form)
 Number of items that were actually answered

If the result is a fraction, round to the nearest whole number. For example, if 6 of 7 items were answered and the sum of those 6 responses was 20, the prorated raw score would be 20 x 7/6 = 23.33. The T-score in this example would be that T-score associated with the rounded whole number raw score (in this case 23, for a T-score of 63.8).

The T-scores are interpreted as follows:

Less than 55 = None to slight
 55.0–59.9 = Mild
 60.0–69.9 = Moderate
 70 and over = Severe

Note: If more than 25% of the total items on the measure are missing the scores should not be used. Therefore, the individual receiving care (or informant) should be encouraged to complete all of the items on the measure.

Frequency of Use

To track change in the severity of the individual's anxiety over time, the measure may be completed at regular intervals as clinically indicated, depending on the stability of the individual's symptoms and treatment status. For individuals with impaired capacity, it is preferred that completion of the measures at follow-up appointments is by the same knowledgeable informant. Consistently high scores on a particular domain may indicate significant and problematic areas for the individual that might warrant further assessment, treatment, and follow-up. Your clinical judgment should guide your decision.

Raw Score	T score	SE*
7	36.3	5.4
8	42.1	5.4
9	44.7	2.9
10	46.7	2.6
11	48.4	2.4
12	49.9	2.3
13	51.3	2.3
14	52.6	2.2
15	53.8	2.2
16	55.1	2.2
17	56.3	2.2
18	57.6	2.2
19	58.8	2.2
20	60.0	2.2
21	61.3	2.2
22	62.6	2.2
23	63.8	2.2
24	65.1	2.2
25	66.4	2.2
26	67.7	2.2
27	68.9	2.2
28	70.2	2.2
29	71.5	2.2
30	72.9	2.2
31	74.3	2.2
32	75.8	2.3
33	77.4	2.4
34	79.5	2.7
35	82.7	3.5

*SE = Standard Error in T-score units

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Appendix C: Demographic Questionnaire

Thank you for participating in the study titled "The Relationship Between Expressing Diversity and Anxiety Among Graduate Psychology Students." Please completed the following demographic questionnaire. Your responses will be kept confidential and will only be used for research purposes.

1. Age
 - 18-24
 - 25-29
 - 30-34
 - 35-39
 - 40-44
 - 45-49
 - 50-54
 - 55-59
 - 60-64
 - 65-79
 - 80-90
 - Prefer not to say
2. Gender
 - Male
 - Female
 - Non-binary/Third gender
 - Prefer not to say
3. Sexual Orientation
 - Heterosexual/Straight
 - Gay or Lesbian
 - Bisexual
 - Pansexual
 - Asexual
 - Other (Please specify: _____)
 - Prefer not to say
4. Race/Ethnicity (Please select all that apply):
 - White
 - Caucasian
 - Black
 - African American
 - Hispanic
 - Latino
 - Asian
 - Asian American
 - Native American

- Alaska Native
 - Native Hawaiian
 - Pacific Islander
 - Multiracial
 - Other (Please specify: _____)
 - Prefer not to say
5. Educational Program
- Master's in Psychology
 - Doctorate in Psychology
6. Program Format
- Online
 - On-campus
 - Hybrid
7. Area of Specialization
- Clinical Psychology
 - Counseling Psychology
 - School Psychology
 - Industrial/Organizational Psychology
 - Research Psychology
 - Health Psychology
 - Forensic Psychology
 - Other (Please specify: _____)
8. Years of Enrollment in Current Program
- 1 year or less
 - 2 years
 - 3 years
 - 4 years
 - 5 years
 - 6 years
 - 7 years
 - 8 years or more
9. Proficiency in English
- Yes
 - No
10. Access to Internet for Completing Surveys
- Yes
 - No
11. Annual Income
- Less than \$20,000
 - \$20,000 - \$39,999
 - \$40,000 - \$59,999
 - \$60,000 - \$79,999
 - \$80,000 - \$99,999

\$100,000 or more

Prefer not to say

12. Have you taken a multiculturalism course before completing this questionnaire?

Yes

No

Appendix D: P-P Plot & Scatterplot

Figure D1

Normal P-P Plot of Regression Standardized Residual – Dependent Variable: Stress

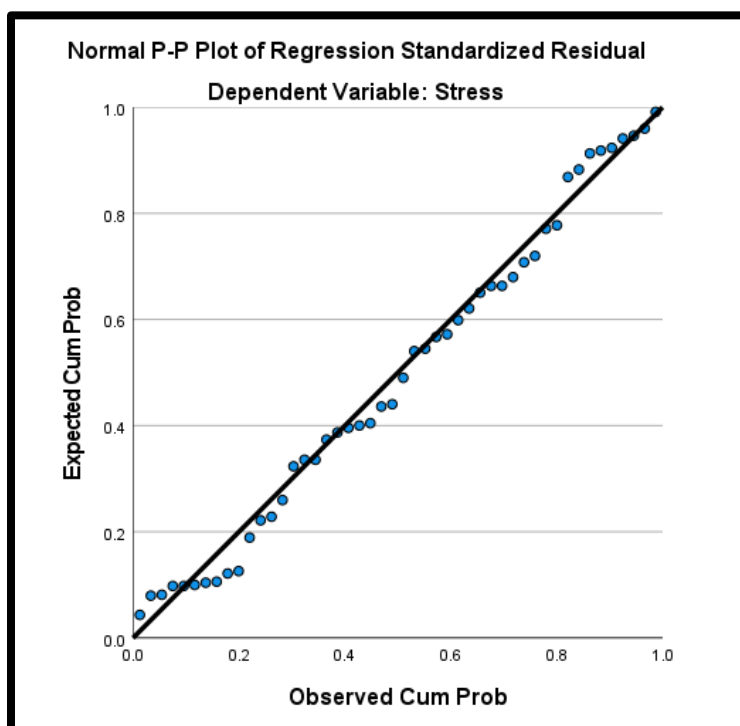
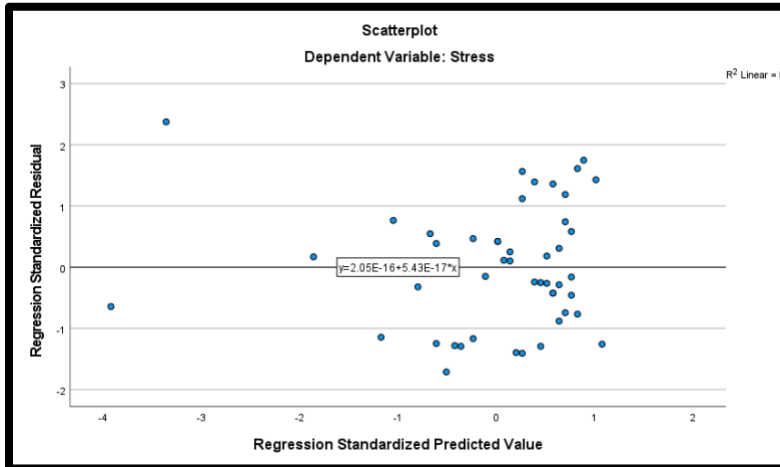


Figure D2

Scatterplot – Dependent Variable: Stress

**Figure D3**

Normal P-P Plot of Regression Standardized Residual - Dependent Variable: Stress

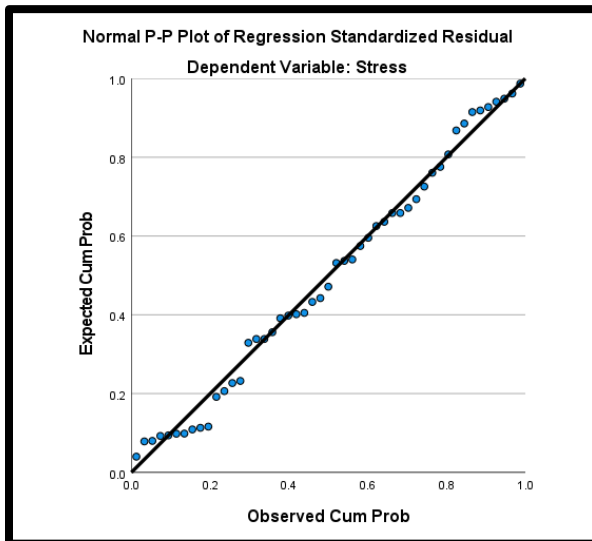


Figure D4

Scatterplot Dependent Variable: Stress

