

A COMPARISON OF THE PERCEPTIONS AND EXPERIENCES OF  
UNDERGRADUATE STUDENTS, GRADUATE STUDENTS, AND INSTRUCTORS  
IN COLLEGE AND UNIVERSITY PSYCHOLOGY PROGRAMS

by

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## ABSTRACT

Extending the methods of previous research comparing the experiential perceptions of undergraduate and graduate psychology students by ethnic and gender identity, two survey instruments were developed for the purpose of comparing the experiential perceptions of psychology students with the experiential perceptions of psychology instructors by ethnic and gender identity. In contrast to earlier research, no significant differences were found in between undergraduate and graduate psychology student perceptions in relation to perceptions of ethnic diversity in academic environments. Additionally, no significant correlation was found between student satisfaction and reported student ethnic identity, student satisfaction and mentoring by instructors, encountered encouragement or barriers, perceived ethnic representation in psychology, and perceived ethnic and gender diversity in academic environments. Qualitatively, undergraduate and graduate students generally aligned in their experiential perceptions except with reported mentoring, with graduate students reporting having experienced greater degrees of mentoring. Additionally, graduate students reported lesser degrees of diversity in both psychology and their immediate academic environments. Instructor responses differed from undergraduate responses regarding mentoring, with undergraduates generally reporting having not been mentored by psychology instructors, and instructors reporting having mentored undergraduate and graduate students. Further refinement of the survey instruments used in the project is needed before the instruments can serve as effective tools to assist in gauging perceived representation and diversity in college and university psychology programs.

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## CHAPTER I

### INTRODUCTION AND REVIEW OF THE LITERATURE

#### **Statement of the Problem**

Promoting the recruitment and retention of ethnic minority undergraduate students, graduate students, practitioners, and faculty within psychology has been identified by the American Psychological Association as a specific goal (CEMRRATT, 1997). Despite efforts by the American Psychological Association to promote recruitment and retention of ethnic minority students, defined as students from an ethnic background other than white and non-Hispanic, into undergraduate, graduate, and doctoral psychology programs minority underrepresentation in psychological education, research, and practice persists (CEMRRATT2, 2008; Hill-Briggs et al., 2004; Beasley et al., 2015). Ethnic minority students are more represented in psychology across all levels of awarded degrees as of 2017 than they were twenty years prior (National Center for Education Statistics, 1999; National Center for Education Statistics, 2019). For example, in 1997 psychology degrees awarded to ethnic minority recipients numbered 488 out of 1,612 (30.27%) for associate degrees, 17,454 out of 74,191 (23.53%) for bachelor's degrees, 2,795 out of 14,353 (19.47%) for master's degrees, and 648 out of 4,053 (15.99%) for doctoral degrees (National Center for Education Statistics, 1999). In 2017 psychology degrees awarded to ethnic minority recipients numbered 7,527 out of 11,286 (66.69%) for associate degrees, 51,674 out of 116,861 (44.22%) for bachelor's degrees, 10,567 out of 27,542 (38.37%) for master's degrees, and 2,177 out of 6,702 (32.48%) for doctoral degrees (National Center for Education Statistics, 2019). Census estimates for 1997 and 2017 put the general ethnic minority population at approximately 73,038,000 out of

267,784,000<sup>2</sup> (27.27%) and approximately 127,448,328 out of 325,147,121 (39.20%) respectively (U.S. Census Bureau, 2017). Although representation has been surpassed at the associate and bachelor's level and has been nearly met at the master's level, representative receipt of doctoral degrees in psychology remains below general population levels.

Despite the growth in ethnic minority representation among awarded psychology degrees, concern has been expressed regarding the rate at which psychology degrees, particularly degrees awarded at the doctoral level, are awarded to ethnic minority students compared to the rate at which demographic shift is occurring in the general U.S. population (U.S. Census Bureau, 2017; Maton et al., 2006; Young and Brooks, 2008). Specifically, concern has been raised that the expanding rate at which psychology degrees, particularly at graduate levels, are awarded to ethnic minority students are not keeping up with expanding demographics among minority populations (Maton, et al., 2006; Young and Brooks, 2008).

Considerable concern has been expressed about the impact of underrepresentation on the efficacy of clinical practice and research in the field (Suinn et al., 2005; Beasley et al., 2015). Additionally, retention rates among graduate and doctoral psychology students have been identified as a concern within the field, particularly as it relates to generating needed practitioners and keeping psychology programs where future practitioners would be trained open and operational (Mason, 2012). Stressors that seem to correlate with psychology program retention rates seem to be exacerbated by unique intersecting racial, gender, and socioeconomic stressors, potentially increasing the vulnerability of minority

graduate psychology students (Smith et al., 2011; Poolokasingham et al., 2014; Hunn et al., 2015; Wagner, 2015).

The potential impact on psychological research and practice of such underrepresentation is wide-ranging. Inadequate representation puts ethnic minorities at risk of receiving underservice or no service with regard to behavioral healthcare and counseling support (Suinn et al., 2005; Hill-Briggs et al., 2004; Beasley et al., 2015). Such reduced or eliminated access to behavioral health and counseling services places a heightened burden on populations which are historically more vulnerable to behavioral health and social service issues than the general population (Suinn et al., 2005; Beasley et al., 2015). Additionally, reducing ethnic and gender representation reduces the potential for advocacy within the field for vulnerable and underserved populations (Hill-Briggs et al., 2004; Beasley et al., 2015). Minority ethnic representation in the field also provides opportunity for modeling professional behaviors, potentially promoting pursuit of the field to individuals in ethnic minority populations (Suinn et al., 2005; Beasley et al., 2015). Underrepresentation also potentially reduces the application of culturally holistic approaches to counseling and psychotherapy and carries a risk of supporting a limited cultural perspective in clinical practice and in the body of research (Suinn et al., 2005; Beasley et al., 2015). Finally, a lack of candidates for psychology programs can put programs at risk of closure, negatively impacting the number of professionals working in the field, the amount of research produced in the field, and the number of future psychological trainees (Suinn et al., 2005; Beasley et al., 2015).

Graduation rates among doctoral students are generally low, with only around half of social science doctoral candidates completing their programs (Mason, 2012). This

contrasts with graduation rates of over 90% for law, business, and medical programs (Mason, 2012). One study identified a positive correlation between student autonomy, student competency, and relatedness to peers and advisors with motivation to continue in their program (Mason, 2012). The same study found a correlation between student autonomy and relatedness to peers and advisors with satisfaction within the program and found that satisfaction within the program was as highly correlated with program completion as feeling compelled to finish (Mason, 2012).

However, efficacy, satisfaction, autonomy, and relatedness can be impacted by stressors uniquely experienced by graduate students who identify as members of minority ethnic populations. In one study, South Asian Canadian students at predominantly white institutions (PWIs) reported experiences of students from the dominant cultural group perceiving them as recent immigrants even if they were multigenerational Canadian citizens, feelings of being excluded from general student social life, sharing a general sense that “being brown” was a liability, encountering assumptions that they were linked to terrorist organizations due to perceived similarities to individuals of Middle Eastern and Central Asian ethnic backgrounds, and feelings of being burdened with performing in the role of cultural expert with regard to their ethnic identity (Poolokasingham et al., 2014). The South Asian Canadian students in that study discussed assumptions by others outside of their ethnic/racial group of competencies in domains the South Asian Canadian students perceived as stereotypical, such as in computer science (Poolokasingham et al., 2014). Additionally, the South Asian Canadian students reported feelings of being invalidated when they brought up concerns relating to interethnic interaction and

expressed a perception of being generally unnoticed by the larger student and academic body (Poolokasingham et al., 2014).

Smith et al. (2011) describe a condition of “racial battle fatigue” and extreme environmental stress (EES) among African American male students at PWIs. These stressors are described as increasing in intensity as the African American male students in the study advanced within their programs, though the authors assert the possibility that increasing levels of education may have made the men more generally aware of and sensitive to stressors unique to their ethnicity and gender (Smith et al., 2011). Lewis and Neville (2015) explored the impact of gendered racism on the psychological well-being of African American female college students. Four intersectional factors of gendered racism encountered by the women in the study included Assumptions of Beauty and Sexual Objectification, Silenced and Marginalized, Strong Black Woman Stereotype, and Angry Black Woman Stereotype (Lewis and Neville, 2015). The researchers found that participants had overwhelmingly experienced each of the identified factors (Lewis and Neville, 2015). Although the individual variations of intersectional gender and ethnic/racial bias is too extensive to adequately cover here, these examples serve to illuminate the pervasive and persistent stressors minority students frequently face in higher education.

Another source of substantial gendered and ethnic/racial stress for minority students are microaggressions (Suárez-Orozco et al. 2015). Microaggressions can be defined as “brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative ... slights and insults” (Sue et al., 2007). Microaggressions can be overt,

conscious behaviors, but are more commonly encountered as covert behaviors and even unconsciously initiated behaviors (Suárez-Orozco et al., 2015). Microaggressions are encountered across a broad spectrum of ethnic/racial and gender identities, and minority individuals who encounter them report feelings of invalidation, internalization of assumed stereotypes, and resistance (Solórzano et al., 2001; Palmer and Maramba, 2015). In addition to the general stresses involved with the pursuit of graduate study, students encountering gendered and racial bias often experience depletion of the psychological energy necessary to adequately manage the associated stresses of such bias (Solórzano et al., 2001; Smith et al., 2011).

An important concept relating to the impact of gender and ethnic diversity within psychology is representation in line with critical mass theory. Critical mass theory refers to the proportion of representative individuals necessary within a system to sustain and perpetuate further representative growth and maintenance within environments (Oliver et al., 1985). Within academia directly, critical mass theory thus implies that minority graduate students face the prospect of social and cultural marginalization, particularly within academic environments which lack critical mass representation among student and/or faculty populations. Additionally, minority graduate students often report a degree of neglect regarding critical feedback of vital academic skills, particularly within areas of scientific writing and research development (Solórzano et al., 2001; Gay 2004). For example, instructors for these students report that faculty will lower their expectations for minority graduate students and deliver disingenuous praise for work that would ordinarily warrant improvement (Gay 2004). These lowered standards deny minority students the opportunity to develop skills for which critical feedback is necessary (Gay 2004). In

academic environments lacking critical mass representation, the academic well-being of minority graduate students can also be impacted by problematic popularity; that is, pressures related to being more highly visible representations of their identified group (Solórzano et al., 2001; Gay 2004). Such visibility can lead to varied pressures. In some circumstances, minority students can be implicitly expected to educate cohorts and faculty on perspectives considered unique to their identified group (Solórzano et al., 2001; Gay 2004). Such expectations place an inappropriate burden on these students to serve a dual role as both student and educator (Brown et al., 1999; Gay 2004).

Additionally, minority graduate students in academic environments which lack critical mass representation report pressure to present as model students, in this instance defined as students aligning with generalized social and academic norms within their programs, departments, and institutions (Solórzano et al., 2001). These students report instances of disproportionately punitive consequences for perceived minor infractions, to an extent of significant short-term and even long-term consequences to their academic and post-academic careers (Solórzano et al., 2001).

Minority students in general have reported a lack of structured guidance regarding the processes, norms, and values of their desired academic and nonacademic positions following the conclusion of their formal education and training (Cheatham and Phelps, 1995; Gay, 2004). Student-faculty relationships within the context of academia are correlated with student academic achievement and socio-emotional functioning within the college and university environment (Decker et al., 2007; Komarraju et al., 2010). Mentoring relationships are particularly important with routing students to professoriate positions within their discipline (Gay, 2004). Additionally, critical mass representation is

important in maintaining an academic pipeline for minority students within all scientific disciplines, psychology included (Gay, 2004). Although critical mass representation is important among the student body, representation at the professorial level is important in motivating and inspiring graduate students of color to pursue higher levels of graduate and post-graduate education and training (Maton et al., 2006).

Having experience with navigating marginality in the academic environment, minority professors are in a unique position to offer guidance to minority graduate students in circumstances both similar and dissimilar to what they experienced on their route to the professoriate (Gay, 2004). However, inappropriate pressure and focus on the mentoring of minority graduate students by minority faculty introduces the risk of cultural and academic isolation (Brown et al., 2010). Additionally, such mentorship matching can deprive students of the opportunity to fully navigate their possibilities for faculty mentoring and may encourage abdication of cultural responsibility among faculty of the dominant cultural group (Brown et al., 2010). Finally, it can deprive faculty and students alike of the opportunity to expand their cultural competencies (Brown et al., 2010).

A study by Maton et al. (2011) explored differences in perceptions between minority and non-minority as well as male and female undergraduate and graduate psychology students. Additionally, the study examined interaction effects among the gendered and ethnic variables. The study found that African American, Asian American, and Hispanic psychology undergraduate and graduate students reported more significantly perceived barriers to general academic and professional achievement due to ethnic identity than did White psychology undergraduate and graduate students. African

Americans, Asian Americans, and Hispanic psychology undergraduate and graduate students also reported encountering greater stereotypical representation of their ethnic identity in psychological texts and more significant non-representation than did White psychology undergraduate and graduate students. Generally, the study positively related greater cultural diversity to increased program satisfaction and found that Hispanic and African American psychology undergraduate and graduate students reported an interest in direct service more often than did White and Asian American students, who reported a greater interest in academic professions (Maton et al., 2011).

The larger body of work relating to minority experiences in graduate psychological education is sizable, but research comparing minority and non-minority psychology student perceptions is minimal. To the best of this author's knowledge, only one study has compared the experiences and perceptions of minority students in psychology to the experiences and perceptions of psychology students from the dominant culture (Maton et al., 2011). However, this study did not include a comparison of the perceptions of psychology department faculty relating to the experiential perspectives of minority and non-minority undergraduate and graduate psychology students. Thus, the current study sought to replicate the methods of the Maton et al. (2011) study by surveying the experiences and perceptions of undergraduate and graduate minority and majority psychology students and comparing the results. This study then extended the methods of Maton et al. (2011) by surveying the perceptions of psychology instructors on the experiences of ethnic majority and minority psychology students. It was hoped that by doing so, this study could provide insight useful to faculty in teaching within the

experiential perceptions of graduate students of psychology, as well as potentially help future students of psychology prepare for the academic environment they will enter.

### **Hypotheses**

This study was developed to examine the following hypotheses:

1. Based on the results of prior studies, it is hypothesized that minority students will report a.) lower levels of perceived representation of their identified ethnic group within psychology and b.) report less ethnic diversity within their programs, and c.) report less gender diversity within their program.

2. Based on the results of prior studies, it is hypothesized that student satisfaction will, regardless of ethnicity, a.) positively correlate with reported mentoring, b.) positively correlate with reported support within their academic environment, c.) positively correlate with reported encouragement from faculty as such encouragement relates to research, and d.) negatively correlate with reported barriers within their academic environments.

3. Student satisfaction, when controlling for ethnicity, will a.) positively correlate with perceived representation within psychology, b.) positively correlate with perceived diversity within their academic environments, c.) negatively correlate with perceived barriers within their academic environments, and d.) positively correlate with perceived encouragement received within their academic environments.

4. Based on the results of prior studies, experiential perceptions will differ between undergraduate psychology students and graduate psychology student.

5. Exploratory analysis will determine whether experiential perceptions will differ between psychology students and psychology instructors.

## CHAPTER II

### METHODS

#### **Instruments**

This study and all related materials were approved for exempt status by Middle Tennessee State University's (MTSU) Institutional Review Board. The study consisted of three online surveys: one survey for student participants recruited through MTSU's Psychology Department research pool, one survey for student participants who were not recruited through MTSU's Psychology Department research pool, and one survey for participants identified as instructors in psychology or faculty within college or university psychology programs or departments. Survey items for both student surveys were identical; the separate survey for student research pool participants was developed at the request of the MTSU Institutional Review Board.

The survey instruments used in this study were adapted from the instrument used in the Maton et al. (2011) study, the original of which was forwarded to the researcher by Dr. Maton for use as a reference. The original instrument utilized items designed to assess the experiences of undergraduate and graduate students of psychology by ethnic and gender identity. This instrument was reviewed by the primary investigator and psychology faculty at MTSU and then modified to incorporate items designed to assess psychology instructor perceptions of undergraduate and graduate psychology student experiences along ethnic and gender identity lines, as well as to allow for both statistical and thematic analysis. This process yielded two separate survey instruments, one survey for student participants and one survey for instructor participants.

To satisfy IRB requirements, two separately identified but identical student survey instruments were created: one for participants recruited through MTSU's Psychology Department research pool Sona server and another for participants who were not recruited through the server. The survey instruments were posted to Qualtrics and required approximately 15 to 30 minutes to complete. The student and instructor survey instruments can be found in Appendixes A and B, respectively.

### **Recruitment**

Participants were recruited from colleges and universities within the United States via MTSU's Psychology Department research pool Sona server, listserv postings by the primary investigator's thesis committee members, professional contacts of the primary investigator's committee members, and psychology students to whom the primary investigator is personally acquainted. Recruited participants were forwarded one of three unique online survey links which directed them to their respective surveys. Participants were provided with informed consent information prior to beginning their surveys and were free to end their participation at any time.

Participation in this study did not provide personal benefit to the participants. However, the results of this study may enhance the general understanding of the experiential perceptions of psychology students along gender and ethnic lines, especially in comparison to the experiential perceptions of psychology instructors, and may be of benefit to future psychology students interested in this subject.

### **Participants**

To participate in this study, student participants had to be 18 years of age or older and enrolled in a college or university psychology program or a program within a college

or university psychology department. Instructor participants had to be working in a college or university psychology program or a program within a college or university psychology department. 100 participants initiated the survey. Of those 100 participants, 26 met our inclusion criteria. See Table 2.1 for participant demographic information.

**Table 2.1**  
*Sociodemographic Characteristics of Participants*

Participant Status	Demographic	Subsample		Student	Total
		N	%	Sample	Sample
Undergraduate	Asian Woman	1	11.1	5.9	3.8
	Black Woman	1	11.1	5.9	3.8
	Black Man	1	11.1	5.9	3.8
	White Woman	6	66.7	35.3	23.1
Graduate	Asian Woman	1	12.5	5.9	3.8
	Hispanic Woman	1	12.5	5.9	3.8
	White Woman	5	62.5	29.4	19.3
	White Man	1	12.5	5.9	3.8
Instructor	White Woman	4	44.4	*	15.4
	White Man	5	55.6	*	19.2

### Data Collection and Coding

Data were collected in mid-September of 2020 via direct download from Qualtrics onto the primary investigator's personal computer and organized in an Excel workbook containing three separate worksheets for undergraduate participants, graduate participants, and instructor participants meeting the inclusion criteria for this project.

Response coding involved both quantitative and thematic analyses of survey item responses by the primary investigator. Responses of no/yes were binomially coded with 0 for no and 1 for yes. Participant ethnic identifiers were coded with 0 for non-minority and 1 for minority. Participant gender identifiers were coded with 0 for women and 1 for men. For comparative analyses between undergraduate and graduate students, undergraduate students were coded with 0 and graduate students were coded with 1. For

comparative analyses between students and instructors, students overall were coded with 0 and instructors were coded with 1.

Survey items and their associated responses were grouped into subject domains categorized as Representation, Environment, and Presentation. For Representation, ordinal variables were assigned with labels consisting of, from highest value to lowest value, Overly represented, Well Represented, Improving Representation, Somewhat Represented, and Not Represented. Additionally, categorical values were assigned to facilitate qualitative analysis of responses to exploratory survey items such as “Please provide more detail.” These categorical values included labels such as White Dominated, Dominated by Men, Dominated by Women, Majority Men, Majority Women, and Unbalanced Student/Instructor Ratio. For survey item responses within the domain Environment, categorical values were applied to facilitate qualitative analysis; these categorical values included labels such as Discrimination, Environment, Faculty, Family, Financial, Peer, and Professional. For survey item responses within the domain Presentation, ordinal values were applied ranging from, in order of highest value to lowest value, Positively Presented, Improving Presentation, Somewhat Presented, and Not Presented. Additionally, the categorical values White Dominated, Dominated by Men, Dominated by Women, Majority Men, Majority Women, and Unbalanced Student/Faculty Ratio were assigned to exploratory survey item responses to facilitate qualitative analysis. See Appendixes C and D for the coding scheme and coding plan used for this project, respectively, and Appendix E for a table of code values.

An independent rater coded 30% of overall participant responses, and the investigators calculated interrater reliability by dividing the number of agreements by

agreements plus disagreements. Responses coded with the same code value by both the primary investigator and secondary investigator were considered agreements, and responses coded with differing codes by the primary and secondary investigators were considered disagreements. Intercoder reliability was achieved at approximately 84%. The primary and secondary investigators then met to discuss the disagreements and reached a consensus for each item. The consensus data were included in the final analysis. See Appendix F for a log of the inter-rater agreement process.

All coded survey responses were then assigned nominal, ordinal, and categorical thematic values to facilitate hypothesis testing. Nominal values were pulled directly from survey item responses consisting of numerical information, such as responses to items asking for the number of years a participant has been studying or teaching psychology, or the number of student or instructor participants have interacted with in the course of their studies or careers, respectively. Ordinal values were assigned to survey item responses in which defined order was perceived and applied by the project investigators according to the coding scheme developed for the project, such as the degree of a participant perception of representation within their academic environment (from “Well Represented” to “Not Represented”) or perceived degree of presentation within educational materials (from “Well Presented to “Not Presented”). Categorical values were applied to survey item responses which did not exhibit an identifiable order but which did represent a specific category of interest, such as applying a value of “Environmental” or “Financial” in reference to the source of a barrier reported to have been encountered by a participant.

## Analysis

For quantitative analyses, quantitative and experimental psychology faculty at Middle Tennessee State University were consulted to determine the most appropriate statistical tests to use for this study's hypotheses. These faculty were also consulted in the modification of the survey instrument used in gathering the tested data. Statistical analyses were run for all ordinal and categorical data, and for nominal data where appropriate. Thematic analyses were conducted on all identified thematic data, and on nominal data where appropriate.

Hypothesis 1a, "Minority students will report lower levels of perceived representation of their identified ethnic and gender group in psychology," was tested using a Welch *t* test to compare reports of perceived representation in psychology with student ethnic identity. Perceived representation in psychology was measured using items asking about participant perceptions of reflective ethnic representation and reflective gender representation in psychology. Item responses were structured as ordinal variables ranking from 1 (Not Represented) to 6 (Well Represented). Survey item responses about participant ethnicity were structured as binomial variables of 0 (Non-Minority) and 1 (Minority). Survey item responses about participant gender identity were structured as binomial variables of 0 (Female) and 1 (Male).

Hypothesis 1b, "Minority students will report less ethnic and gender diversity within their programs," was measured using two Welch *t* tests which compared perceived ethnic and gender diversity in academic environments to student ethnic identity. Perceived diversity in academic environments was measured using items asking about

participant perceptions of ethnic and gender diversity in academic environments., and item responses for each were structured as binomial variables of 0 (No) and 1 (Yes).

For Hypothesis 2a, “Student satisfaction will positively correlate with reported mentoring, regardless of student ethnicity,” a phi correlation coefficient was used to compare reported student satisfaction and reported mentoring. Reported student satisfaction was measured using item responses structured into binomial variables of 0 (Not Satisfied) and 1 (Satisfied). Reported mentoring was measured using item responses structured into binomial variables of 0 (Experienced Little to No Mentoring) and 1 (Experienced Mentoring).

For Hypothesis 2b, “Student satisfaction will positively correlate with reported support within their academic environment, regardless of student ethnicity,” a phi correlation coefficient was used to compare student satisfaction and reported support within the academic environment. Reported support was measured using item responses structured into binomial variables of 0 (Experienced Little to No Support) or 1 (Experienced Support).

For Hypothesis 2c, “Student satisfaction will positively correlate with reported encouragement from faculty as such encouragement relates to research, regardless of student ethnicity or gender,” a phi correlation coefficient was used to compare student satisfaction and reported encouragement from faculty related to research. Reported encouragement was measured using item responses coded into binomial variables of 0 (Experienced Little to No Encouragement) to 1 (Experienced Encouragement).

For Hypothesis 2d, “Student satisfaction will negative correlate with reported barriers within their academic environments, regardless of student ethnicity or gender,” a

phi correlation coefficient was used to compare student satisfaction and reported barriers within their academic environments. Reported barriers were measured using item responses coded into binomial variables of 0 (Experienced Few or No Barriers) to 1 (Experienced Barriers).

Hypothesis 3a, “Student satisfaction will positively correlate with perceived representation within psychology when controlling for ethnicity,” was measured with a partial correlation between student satisfaction and perceived representation within psychology, controlling for ethnicity.

Hypothesis 3b, “Student satisfaction will positively correlate with perceived representation in their academic environments when controlling for ethnicity,” was measured with a partial correlation between student satisfaction and perceived representation within their academic environment, controlling for ethnicity.

For Hypothesis 3c, “Student satisfaction will positively correlate with perceived barriers within their academic environments when controlling for ethnicity,” was measured with a partial correlation between student satisfaction and perceived barriers within their academic environments, controlling for ethnicity.

For Hypothesis 3d, “Student satisfaction will positively correlate with perceived encouragement within their academic environments when controlling for ethnicity,” was measured with a partial correlation between student satisfaction and perceived barriers within their academic environments, controlling for ethnicity.

Due to the nature of the survey instruments, we obtained a wide variety of responses related to Hypothesis 4, “Psychology student perceptions and experiential perceptions will differ by student status and ethnicity.” Thus, a qualitative analysis was

conducted of responses to survey items designed to gather comparable information from both student and instructor participants, including responses to exploratory follow-up items. Analyzed themes included perceptions of representation within academic environments and psychology, perceptions of appropriate presentation within academic environments ad psychology, perceived barriers and sources of support in pursuit of psychological education, and perceived degree of mentoring of psychology students by psychology instructors.

For Hypothesis 5, “Psychology student experiential perceptions will differ from psychology instructor experiential perceptions,” a thematic analysis was conducted to compare the experiential perceptions of participating psychology students to the experiential perceptions of participating psychology instructors, with a specific focus on comparison at the ethnic and gender level. Comparisons were made between the responses of every student participant to the responses of participating instructors, then separate comparisons were made between undergraduate students and instructors and graduate students and instructors. As with Hypothesis 4, analyzed themes included perceptions of representation within academic environments and psychology, perceptions of appropriate presentation within academic environments ad psychology, perceived barriers and sources of support in pursuit of psychological education, and perceived degree of mentoring of psychology students by psychology instructors.

## CHAPTER III

### RESULTS

#### **Hypothesis 1**

For Hypothesis 1a, a Welch  $t$  test comparing student perceptions of ethnic representation in psychology indicated a significant difference in student perceptions of ethnic representation in psychology between non-minority psychology students and minority psychology students,  $t(6.78) = 5.82, p < .001$ . Perceptions of ethnic representation in psychology were lower for minority students than for non-minority students.

For Hypothesis 1b, a Welch  $t$  test comparing psychology student perceptions of ethnic diversity in academic environments indicated that there was not a significant difference in perceptions of ethnic diversity between minority and non-minority psychology students,  $t(7.48) = -.19, p = .856$ . A separate Welch  $t$  test indicated a significant difference between minority and non-minority psychology students in perceptions of gender diversity in academic environments,  $t(10) = -3.46, p = .006$ . Generally, non-minority psychology students perceived less gender diversity in their academic environments than minority psychology students. See Table 3.1 for descriptive statistics and Table 3.2 for Welch  $t$  test results.

**Table 3.1**  
*Descriptive Statistics*

		<i>N</i>	<i>M</i>	<i>SD</i>
<i>Ethnic Representation in Psychology</i>	Non-Minority	12	4.08	.793
	Minority	5	1.40	.894
		<i>N</i>	<i>M</i>	<i>SD</i>
<i>Reflective Ethnic Diversity in Academic Environment</i>	Non-Minority	11	.55	.522
	Minority	5	.60	.548
		<i>N</i>	<i>M</i>	<i>SD</i>
<i>Reflective Gender Diversity in Academic Environment</i>	Non-Minority	11	.45	.522
	Minority	5	1.00	.000

**Table 3.2**

*Welch t Tests*

<i>Ethnic Representation in Psychology</i>								
		<i>T</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>	
							<i>Lower</i>	<i>Upper</i>
		5.822	6.784	.001	2.683	.461	1.586	3.780
<i>Reflective Cultural Diversity in Academic Environment</i>								
		<i>T</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>	
		-.187	7.478	.856	-.055	.291	-.734	.625
<i>Reflective Gender Diversity in Academic Environment</i>								
		<i>T</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>	
		-3.464	10.000	.006	-.545	.157	-.896	-.195

## Hypothesis 2

For Hypothesis 2, a series of phi correlation coefficients were run to compare reports of psychology student satisfaction to variables the primary investigator and the primary investigator's thesis committee determined to be related to student satisfaction. See Table 3.3 for phi correlation coefficient results. For Hypothesis 2a, psychology student satisfaction did not significantly correlate with reported mentoring by psychology instructors. Additionally, psychology student satisfaction did not significantly correlate with reported encouragement to interact with psychology instructors.

For Hypothesis 2b, psychology student satisfaction did not significantly correlate with reported encouragement encountered by psychology students. No student participants reported associating encountered encouragement with their ethnic identity.

For Hypothesis 2c, psychology student satisfaction did not significantly correlate with encountered encouragement related to research. Additionally, psychology student satisfaction did not significantly correlate with reported encouragement to present papers or other research at professional conferences and events. Reported psychology student satisfaction also did not significantly correlate with reported encouragement to coauthor a paper or book chapter.

For Hypothesis 2d, psychology student satisfaction did not significantly correlate with reported barriers encountered by psychology students. Additionally, psychology student satisfaction did not significantly correlate with reported association of barriers with ethnic identity.

**Table 3.3***Phi Correlations*

<i>Psychology Student Satisfaction – Mentoring</i>							
		Satisfaction				Value	Apprx. Sig.
		No	Yes	Total			
Mentored by Instructors	No	1	8	9	Phi	.228	.362
	Yes	0	7	7			
	Total	1	15	16			
<i>Psychology Student Satisfaction – Encouragement</i>							
		Satisfaction				Value	Apprx. Sig.
		No	Yes	Total			
Encouragement - Instructor Interaction	No	0	6	6	Phi	-.200	.424
	Yes	1	9	10			
	Total	1	15	16			
Encouragement – General	No	1	6	7	Phi	.286	.268
	Yes	0	8	8			
	Total	1	14	15			
<i>Psychology Student Satisfaction – Encouragement Related to Research</i>							
		Satisfaction				Value	Apprx. Sig.
		No	Yes	Total			
Encouragement – Research	No	0	3	3	Phi	-.124	.620
	Yes	1	12	13			
	Total	1	15	16			
Encouragement – Conferences	No	1	11	12	Phi	.149	.551
	Yes	0	4	4			
	Total	1	15	16			
Encouragement to Coauthor Work	No	1	11	12	Phi	.149	.551
	Yes	0	4	4			
	Total	1	15	16			
<i>Psychology Student Satisfaction – Barriers Encountered by Psychology Students</i>							
		Satisfaction				Value	Apprx. Sig.
		No	Yes	Total			
Barriers Encountered	No	0	11	11	Phi	-.443	.086
	Yes	1	3	4			
	Total	1	14	15			
Barriers – Ethnicity	No	1	9	10	Phi	.100	.740
	Yes	0	1	1			
	Total	1	10	11			

### Hypothesis 3

For Hypothesis 3, a series of partial correlations were run to compare reported psychology student satisfaction with perceptions of ethnic representation in psychology, perceptions of ethnic and gender diversity in academic environments, perceived encouragement encountered by psychology students, and perceived barriers encountered by psychology students when controlling for student ethnicity. See Table 3.4 for descriptive statistics and Table 3.5 for partial correlation results. Additionally, Pearson correlations were run to compare student satisfaction with ethnic representation, perceived ethnic and gender diversity, perceived encouragement, and perceived barriers without controlling for student ethnicity. See Table 3.6 for Pearson correlation results. For Hypothesis 3a, a partial correlation was run to compare reported student satisfaction with perceived ethnic representation in psychology when controlling for ethnicity. No significant partial correlation was reported between student satisfaction and perceived ethnic representation in psychology when controlling for ethnic identity. Pearson correlations reported no significant correlation between student satisfaction and perceived ethnic representation or student satisfaction and student ethnic identity. However, Pearson correlations did report a significant negative correlation between perceived ethnic representation in psychology and reported student ethnic identity, indicating that minority psychology students reported lower levels of perceived ethnic representation in psychology than non-minority psychology students.

For Hypothesis 3b, a series of partial correlations were run to compare student satisfaction with perceived degree of ethnic and gender diversity in their academic environments when controlling for ethnic identity. No significant partial correlation was

reported between student satisfaction and perceived ethnic diversity within academic environments when controlling for student ethnicity. Pearson correlations reported no significant correlation between student satisfaction and perceived cultural diversity or student ethnicity and perceived cultural diversity. Additionally, partial correlations reported no significant correlation between student satisfaction and perceptions of gender diversity in academic environments when controlling for student ethnicity, and Pearson correlations reported no significant correlation between reported student satisfaction and perceptions of gender diversity in academic environments or student ethnic identity and perceptions of gender diversity within academic environments.

For Hypothesis 3c, a partial correlation was run to compare student satisfaction with perceived barriers encountered by psychology students when controlling for ethnic identity. No significant partial correlation was reported between student satisfaction and perceived barriers encountered by psychology students when controlling for student ethnicity. Pearson correlations reported no significant correlation between student satisfaction and encountered barriers and did not report a significant correlation between student ethnic identity and encountered barriers.

For Hypothesis 3d, a partial correlation was performed to compare student satisfaction with reported encouragement to participate in research when controlling for student ethnicity. No significant partial correlation was reported between student satisfaction and reported encouragement to participate in research. Additionally, no significant partial correlation was found between student satisfaction and reported encouragement to present research at a professional conference or student satisfaction and reported encouragement to co-author a book chapter or a research paper when

controlling for student ethnicity. Pearson correlations reported no correlation between student satisfaction and reported encouragement to participate in research when not controlling for student ethnicity and reported no significant correlation between student ethnicity and reported encouragement to participate in research. Additionally, Pearson correlations reported no significant correlation between student satisfaction and reported encouragement to present research at professional conferences or student satisfaction and reported encouragement to co-author book chapters or research papers. Finally, Pearson correlations did not report a significant correlation between student ethnicity and reported encouragement to present research at a professional meeting or student ethnicity and reported encouragement to co-author a book chapter or a research paper.

**Table 3.4**  
*Descriptive Statistics*

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>
<i>Ethnic Representation in Psychology</i>			
Satisfaction	.94	.25	16
Ethnic Representation	3.30	1.54	16
Ethnic ID	.25	.44	16
<i>Ethnic and Gender Diversity in Academic Environments</i>			
Satisfaction	.93	.26	15
Ethnic Diversity	.53	.52	15
Ethnic ID	.27	.46	15
Satisfaction	.93	.26	15
Gender Diversity	.60	.50	15
Ethnic ID	.27	.46	15
<i>Barriers Encountered by Psychology Students</i>			
Satisfaction	.93	.26	15
Barriers	.27	.46	15
Ethnic ID	.20	.41	15
Satisfaction	.91	.30	11
Barriers – Ethnic ID	.09	.30	11
Ethnic ID	.18	.41	11
<i>Encouragement Encountered by Psychology Students</i>			
Satisfaction	.94	.25	16
Encouragement - Research	.81	.40	16
Ethnic ID	.25	.45	16
Satisfaction	.94	.25	16
Encouragement – Conference	.25	.45	16
Ethnic ID	.25	.45	16
Satisfaction	.94	.25	16
Encouragement – Co-author	.25	.45	16
Ethnic ID	.25	.45	16

**Table 3.5**  
*Partial Correlations Controlling for Reported Student Ethnic Identity*

<i>Ethnic Representation in Psychology</i>		
		<u>Ethnic Representation</u>
Student Satisfaction	Correlation	.03
	Sig. (2-tailed)	.91
	Df	13
<i>Ethnic and Gender Diversity in Academic Environments</i>		
		<u>Ethnic Diversity</u>
Satisfaction	Correlation	.30
	Sig. (2-tailed)	.30
	df	12
		<u>Gender Diversity</u>
Satisfaction	Correlation	-.35
	Sig. (2-tailed)	.23
	df	12
<i>Barriers Encountered by Psychology Students</i>		
		<u>Barriers</u>
Satisfaction	Correlation	-.46
	Sig. (2-tailed)	.090
	df	13
		<u>Barriers – Ethnic ID</u>
Satisfaction	Correlation	.13
	Sig. (2-tailed)	.73
	df	8
<i>Encouragement Encountered by Psychology Students</i>		
		<u>Encouragement – Research</u>
Satisfaction	Correlation	-.17
	Sig. (2-tailed)	.54
	df	13
		<u>Encouragement –Conferences</u>
Satisfaction	Correlation	.15
	Sig. (2-tailed)	.59
	df	13
		<u>Encouragement – Co-author</u>
Satisfaction	Correlation	.15
	Sig. (2-tailed)	.59
	df	13

**Table 3.6**  
*Pearson Correlations*

<i>Ethnic Representation in Psychology</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.15	-
Ethnic Representation	-.18	-.90*
<i>Ethnic Diversity in Academic Environments</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.16	-
Ethnic Diversity	.29	-.04
<i>Gender Diversity in Academic Environments</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.16	-
Gender Diversity	-.22	.49
<i>General Barriers</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.13	-
Barriers	-.44	.08
<i>Association of Barriers with Ethnic ID</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.15	-
Barriers – Ethnic ID	.10	-.15
<i>Encouragement – Research</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.13	-
Encouragement – Research	.29	.13
<i>Encouragement – Conference</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.15	-
Encouragement – Conference	-.12	.28
<i>Encouragement – Co-author</i>		
	Satisfaction	Ethnic ID
Satisfaction	-	-
Ethnic ID	.15	-
Encouragement – Co-author	.15	.00

\*  $p < .001$

### Hypothesis 4

For Hypothesis 4, a series of thematic analyses were conducted to compare the experiential perceptions of undergraduate and graduate psychology students. See Table 3.7 for a demographic breakdown of responding student participants and Table 3.8 for a table summary of general response themes.

**Table 3.7**  
*Student Demographics*

<b>Status</b>	<b>Demographic</b>	<b>N</b>
Undergraduate	Asian Woman	1
	Black Woman	1
	Black Man	1
	White Woman	6
Graduate	Asian Woman	1
	Hispanic Woman	1
	White Woman	5
	White Man	1

### **Perceived Ethnic Representation in Psychology**

For perceptions of ethnic representation in psychology, undergraduate student responses varied by reported ethnic identity. White women reported that their identified ethnic group was generally well represented in psychology, whereas an Asian woman, a Black woman, and a Black man reported that their identified respective ethnic groups were generally minimally represented.

Graduate student responses also varied by reported ethnic identity, with white women and one white man reporting that White ethnic identities are generally well represented in psychology. One graduate Asian woman reported a perception of improving representation of Asian ethnic identity in psychology, and one graduate Hispanic woman reported a perception that Hispanic ethnic identity was minimally represented in psychology.

Table 3.8

## Student Experiential Perceptions

<i>Ethnic/Racial Representation in Psychology</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	Min Rep	Min Rep	Min Rep	.	Well Rep	.
Graduate	Imp Rep	.	.	Min Rep	Well Rep	Well Rep
<i>Gender Representation in Psychology</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	.	Min Rep	Well Rep	.	Well Rep	.
Graduate	.	.	.	Min Rep	Min Rep	Well Rep
<i>Ethnic Diversity in Academic Environment</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	No	Yes	Yes	.	Yes	.
Graduate	Yes	.	.	No	No	No
<i>Gender Diversity in Academic Environment</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	Yes	Yes	Yes	.	Yes	.
Graduate	Yes	.	.	Yes	No	Yes
<i>Encouragement or Special Assistance</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	No	No	Yes	.	No	.
Graduate	Yes	.	.	Yes	Yes	No
<i>Association of Encouragement or Special Assistance with Ethnic Identity</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	No	No	No	.	No	.
Graduate	No	.	.	No	No	No
<i>Association of Encouragement or Special Assistance with Gender Identity</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	No	No	No	.	No	.
Graduate	No	.	.	No	No	No
<i>Satisfied with Studies in Psychology</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	Yes	Yes	Yes	*	Yes	*
Graduate	*	*	*	Yes	Yes	No
<i>Encouraged to Participate in Research</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	Yes	Yes	Yes	*	Yes	*
Graduate	Yes	*	*	Yes	No	Yes
<i>Encouraged to Present Papers</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	No	No	No	*	No	*
Graduate	Yes	*	*	Yes	No	No
<i>Encouraged to Co-Author Research</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	No	No	No	*	No	*
Graduate	Yes	*	*	Yes	No	No
<i>Encountered Barriers or Special Negative Challenges</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	*	No	No	*	No	*
Graduate	No	*	*	Yes	No	Yes
<i>Association of Barriers with Ethnic Identity</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	*	*	No	*	No	*
Graduate	*	*	*	No	No	No
<i>Association of Barriers with Gender Identity</i>						
	Asian Woman	Black Woman	Black Man	Hispanic Woman	White Woman	White Man
Undergraduate	*	*	No	*	No	*
Graduate	*	*	*	No	No	No

### **Perceived Gender Representation in Psychology**

For perceptions of gender representation in psychology, undergraduate White woman reported perceptions that their gender was well represented in psychology. An undergraduate Black woman reported a perception that her gender identity was minimally represented. An undergraduate Black man reported a perception that his gender identity was well represented in psychology.

In contrast to undergraduate White women, graduate White women reported a perception that their gender identity is minimally represented in psychology. A graduate Hispanic woman reported a perception that her gender identity was well represented in psychology. A graduate White man also reported a perception that his gender identity was well represented in psychology.

### **Perceived Ethnic Diversity in Academic Environments**

Among undergraduate psychology students, White women generally reported positive perceptions of ethnic diversity in their academic environments. Additionally, one undergraduate Black woman and one undergraduate Black man each reported positive perceptions of ethnic diversity within their academic environments. One undergraduate Asian woman reported a negative perception of ethnic diversity within her academic environment.

Among graduate psychology students, White women generally reported a negative perception of ethnic diversity within their academic environments, in contrast to undergraduate White women. One graduate White man and one graduate Hispanic woman each reported negative perceptions of appropriate ethnic diversity within their academic environments. One graduate Asian woman, in contrast to the response of the

undergraduate Asian woman, reported a positive perception of appropriate ethnic diversity within her academic environment.

### **Perceived Gender Diversity in Academic Environments**

Generally, participating undergraduate psychology students reported positive perceptions of gender diversity within their academic environments.

Among participating graduate psychology students, White women generally reported a negative perception of gender diversity within their academic environments, in contrast to the general response of undergraduate White women. One graduate White man, one graduate Asian woman, and one graduate Hispanic woman each reported positive perceptions of gender diversity within their academic environments.

### **Mentoring by Instructors**

Generally, undergraduate psychology students reported that they have not been mentored by instructors of psychology. This contrasts with responses from graduate psychology students who, with the exception of one White man, generally reported having been mentored by instructors of psychology.

### **Encouragement to Interact with Instructors**

Undergraduate White women generally reported that they have not been encouraged to interact with instructors. One undergraduate Black man stated that he had encountered encouragement to interact with instructors. One undergraduate Black woman and one undergraduate Asian woman each reported that they had not encountered encouragement to interact with faculty.

In contrast to undergraduate White women, graduate White women generally reported that they have encountered encouragement to interact with instructors. One

graduate White man reported that he had not encountered special assistance. In contrast to the undergraduate Asian woman, a graduate Asian woman reported that she had been encouraged to interact with instructors. One graduate Hispanic woman also reported having been encouraged to interact with faculty.

Overall, undergraduate psychology students generally reported that they have not been encouraged to interact with instructors, and graduate psychology students unilaterally reported that they have been encouraged to interact with instructors.

### **Satisfaction with Psychological Studies**

All responding undergraduate psychology students reported being satisfied with their psychological studies. Graduate White women and a graduate Hispanic woman reported satisfaction with their psychological studies, but a graduate White man reported being unsatisfied with his psychological studies.

### **Encouragement or Assistance**

Among undergraduate psychology students, White women generally reported encountering no special encouragement or assistance in their academic career. Additionally, one undergraduate Asian woman reported encountering no special encouragement or assistance. An undergraduate Black man reported encountering encouragement from his professors and academic advisors.

In contrast to undergraduate White woman, graduate White women generally reported encountering encouragement and assistance. In another contrast, a graduate Asian woman reported encountering encouragement or assistance. A graduate Hispanic woman reported encountering encouragement or assistance. A graduate White man reported that he has not encountered special encouragement or assistance.

### **Association of Encouragement or Assistance with Ethnic or Gender Identity**

No responding undergraduate or graduate psychology students reported associating encountered encouragement or assistance with their reported ethnic identities, and apart from one undergraduate White woman no students reported associating encountered encouragement with their reported gender identities.

### **Encouragement to Participate in Research**

All responding undergraduate psychology students reported being encouraged to participate in research. Graduate White women generally reported encountering encouragement to participate in research. A graduate White man reported encountering encouragement to participate in research, as did a graduate Asian woman and a graduate Hispanic woman.

### **Encouragement to Present Research**

Responding undergraduates generally reported that they have not encountered encouragement to present research in a professional setting. Graduate White women generally reported that they were not encouraged to present papers, as did one graduate White man. A graduate Asian woman and a graduate Hispanic woman both reported encountering encouragement to present papers.

### **Encouragement to Co-Author Research or Book Chapters**

Undergraduate White women generally reported that they have not encountered encouragement to co-author research or book chapters. All other reporting undergraduate psychology students reported that they have not encountered encouragement to co-author research or book chapters.

Like undergraduate White women, graduate White women generally reported that they have not encountered encouragement to co-author research. A graduate White man reported that he has not encountered encouragement to co-author research. A graduate Asian woman reported encountering encouragement to co-author research, in contrast to the undergraduate Asian woman. Finally, a graduate Hispanic woman reported encountering encouragement to co-author research.

### **Barriers or Challenges**

Undergraduate White women generally reported encountering no special barriers or challenges in their academic career. An undergraduate Black man and an undergraduate Black woman both reported encountering no special barriers in their academic career.

Like undergraduate White women, graduate White women generally reported encountering no special barriers to their academic pursuits. A graduate Asian woman reported encountering no special barriers to her academic goals. A graduate Hispanic woman and a graduate White man each reported encountering special barriers to their academic goals.

### **Association of Reported Barriers or Challenges with Ethnic or Gender Identity**

No responding undergraduate or graduate psychology students reported associating any encountered barriers to their academic goals with their reported ethnic identity. Similarly, undergraduate psychology students generally did not report associating encountered barriers with their reported gender identity.

Graduate psychology students generally did not report associating encountered barriers with their reported gender identity, aligning with general reports from undergraduate students.

### Hypothesis 5

For Hypothesis 5, a series of thematic analyses were conducted to compare the experiential perceptions of psychology students and psychology instructors. See Table 3.9 for a demographic breakdown of responding participants and Table 3.10 for a table summary of general response themes.

**Table 3.9**

#### *Participant Demographics*

<b>Status</b>	<b>Demographic</b>	<b>N</b>
Undergraduate	Asian Woman	1
	Black Woman	1
	Black Man	1
	White Woman	6
Graduate	Asian Woman	1
	Hispanic Woman	1
	White Woman	5
	White Man	1
Instructor	White Woman	4
	White Man	5

### **Perceived Ethnic Diversity in Academic Environments**

Like psychology students, psychology instructor responses were divided on their perceptions of an adequate or appropriate degree of ethnic diversity in their academic environments. Instructors who were White women were evenly divided in their responses. Instructors who were White men expressed the perception that cultural diversity in their academic environments is not adequate but is improving.

### **Perceived Gender Diversity in Academic Environments**

Psychology students and psychology instructors generally agreed that their academic environments featured an appropriate degree of gender diversity.

### **Mentoring of Psychology Students**

Responding psychology instructors generally indicated that they either chose or were expected to mentor undergraduate students, generally contrasting with responses from undergraduate psychology students indicating that most undergraduate respondents were not mentored by instructors or encouraged to interact with instructors. Graduate psychology students generally reported that they were personally mentored by or encouraged to interact with psychology instructors, which aligns with psychology instructor reports indicating that instructors were generally required or chose to mentor graduate students.

### **Perceived Encouragement or Assistance Encountered by Psychology Students**

Psychology instructors generally reported a perception that psychology students have encountered encouragement or assistance in their psychological studies.

### **Perceived Association by Psychology Students of Encountered Encouragement or Assistance with Student Ethnic and Gender Identity**

Overall, psychology students did not generally associate reported assistance or encouragement with either their ethnic or gender identities, and psychology instructors generally reported a perception that students did not express a belief that encountered forms of encouragement or assistance were related to their ethnic or gender identities.

**Table 3.10**  
*Student and Instructor Experiential Perceptions*

<b>Ethnic Diversity in Academic Environments</b>	<b>Undergraduate</b> Generally appropriate degree of ethnic and cultural diversity in academic environment.	<b>Graduate</b> Generally inadequate degree of ethnic and cultural diversity in academic environment.	<b>Instructor</b> Generally inadequate but improving degree of ethnic and cultural diversity in academic environments.
<b>Gender Diversity in Academic Environments</b>	<b>Undergraduate</b> Generally appropriate degree of gender diversity in academic environment.	<b>Graduate</b> Generally appropriate degree of gender diversity in academic environment.	<b>Instructor</b> Generally appropriate degree of gender diversity in academic environment.
<b>Formation of mentoring relationships between students and instructors</b>	<b>Undergraduate</b> Generally did not experience mentoring relationships with instructors.	<b>Graduate</b> Generally experienced mentoring relationships with instructors.	<b>Instructor</b> Generally encouraged or chose to mentor undergraduate and graduate psychology students.
<b>Encouragement or Special Assistance Encountered by Psychology Students</b>	<b>Undergraduate</b> Generally did not encounter encouragement or special assistance in pursuit of their psychological education.	<b>Graduate</b> Generally encountered encouragement or special assistance in pursuit of their psychological education.	<b>Instructor</b> Generally recalled students expressing that they have encountered encouragement or special assistance in pursuit of their psychological education.
<b>Association of Encouragement or Special Assistance with Ethnic Identity</b>	<b>Undergraduate</b> Generally did not associate encouragement or special assistance with reported ethnic identity.	<b>Graduate</b> Generally did not associate encouragement or special assistance with reported ethnic identity.	<b>Instructor</b> Generally did not perceive students as associating encouragement or special assistance with students' reported ethnic identity.
<b>Association of Encouragement or Special Assistance with Gender Identity</b>	<b>Undergraduate</b> Generally did not associate encouragement or special assistance with reported gender identity.	<b>Graduate</b> Generally did not associate encouragement or special assistance with reported gender identity.	<b>Instructor</b> Generally did not perceive students as associating encouragement or special assistance with students' reported gender identity.
<b>Student Encouragement to Participate in Research</b>	<b>Undergraduate</b> Generally reported having encountered encouragement to participate in research.	<b>Graduate</b> Generally reported having encountered encouragement to participate in research.	<b>Instructors</b> Generally reported having encouraged undergraduate and graduate psychology students to participate in research.
<b>Barriers Encountered by Psychology Students</b>	<b>Undergraduate</b> Generally reported having not encountered barriers to their psychological education.	<b>Graduate</b> Generally reported having not encountered barriers to their psychological education.	<b>Instructors</b> Generally reported encountering students who reported barriers to their psychological education.
<b>Association of Encountered Barriers and Special Challenges with Ethnic Identity</b>	<b>Undergraduate</b> Generally did not associate encountered barriers and special challenges with reported ethnic identity.	<b>Graduate</b> Generally did not associate encountered barriers and special challenges with reported ethnic identity.	<b>Instructors</b> Generally perceived students as associating encountered barriers and special challenges with reported ethnic identity of students.
<b>Association of Encountered Barriers and Special Challenges with Gender Identity</b>	<b>Undergraduate</b> Generally did not associate encountered barriers and special challenges with reported gender identity.	<b>Graduate</b> Generally did not associate encountered barriers and special challenges with reported gender identity.	<b>Instructors</b> Generally perceived students as associating encountered barriers and special challenges with reported gender identity of students.

### **Perceived Encouragement to Participate in and Present Research Extended to Students**

Responding psychology instructors generally indicated a perception of encouraging undergraduate and graduate psychology students to participate in research. These responses are generally reflected in responses from both undergraduate and graduate psychology students, who generally reported encountering encouragement to participate in research. However, the reported nature of this encouragement varied by student status. Psychology instructors generally indicated perceptions of encouraging undergraduate psychology students to present papers, contrasting with general undergraduate student reports expressing perceptions that they have not encountered encouragement from instructors to present papers. Instructor responses that expressed perceptions of encouraging graduate psychology students to present papers generally aligned with graduate psychology student reports of encountering such encouragement, however.

### **Perception of Barriers or Challenges Encountered by Students**

Responding psychology students generally reported that they have not encountered barriers to their academic goals. This contrasts with reports from participating psychology instructors, who generally reported that they have encountered students who have reported barriers to their academic goals.

## CHAPTER IV

### DISCUSSION

This project was inspired by a previous study by Maton et al. (2011) which compared the experiential perceptions of undergraduate and graduate psychology students of psychology along ethnic and gender lines and sought to extend the methods of Maton et al. (2011) by including an additional comparison to the experiential perceptions of psychology instructors. This comparison was performed to determine if responses from psychology instructors indicated a subjective awareness of barriers, assistance, and satisfaction experienced by psychology students at the undergraduate and graduate level. In doing so, it was hoped that possible alignment or divergence between student and instructor perspectives could be identified so as to aid in a cohesive pursuit of increasing the diversity of future professionals in psychology, and to aid in future refinement of the instruments developed for this project.

This project was intended to test the following quantitative hypotheses:

1. Based on the results of prior studies, it is hypothesized that minority students will report a.) lower levels of perceived representation of their identified ethnic group within psychology and b.) report less ethnic diversity within their programs, and c.) report less gender diversity within their program.

2. Based on the results of prior studies, it is hypothesized that student satisfaction will, regardless of ethnicity, a.) positively correlate with reported mentoring, b.) positively correlate with reported support within their academic environment, c.) positively correlate with reported encouragement from faculty as such encouragement

relates to research, and d.) negatively correlate with reported barriers within their academic environments.

3. Student satisfaction, when controlling for ethnicity, will a.) positively correlate with perceived representation within psychology, b.) positively correlate with perceived diversity within their academic environments, c.) negatively correlate with perceived barriers within their academic environments, and d.) positively correlate with perceived encouragement received within their academic environments.

Additionally, this project was intended to test the following qualitative hypotheses:

4. Based on the results of prior studies, experiential perceptions will differ between undergraduate psychology students and graduate psychology student.

5. Exploratory analyses will determine whether experiential perceptions will differ between psychology students and psychology instructors.

### **Hypothesis 1**

For Hypothesis 1a, perceptions of ethnic representation in psychology were lower for minority psychology students than for non-minority psychology students, which is consistent with findings in previous studies (Maton et al., 2011). Perceptions of gender representation by reported gender identity were intended to be tested, but low sample size of male student participants ( $n = 2$ ) prevented adequate testing of this hypothesis.

For Hypothesis 1b, no significant difference in perceptions of ethnic diversity in academic environments was indicated between non-minority and minority psychology students, which differed from the findings of Maton et al. (2011). A possible reason for this may be actual increased ethnic diversity within college and university psychology

programs (National Center for Education Statistics, 1999; National Center for Education Statistics, 2019). Such increased diversity may relate directly to the American Psychological Association's explicit call to increase the diversity of the field (CEMRATT2, 2013). Future research comparing student demographics within psychology programs over time with reported direct and indirect inspirations for students to pursue psychological education could aid in qualifying this proposed explanation.

Notably, when testing for perceptions of gender diversity in psychology, non-minority students generally perceived less gender diversity than minority students. Future replication of this test could help increase the generalizability of this finding. Additionally, a thematic analysis could aid in identifying idiographic factors influencing differences in responses between non-minority and minority psychology students.

## **Hypothesis 2**

Psychology student satisfaction did not correlate with reported mentoring by psychology instructors or encouragement to interact with instructors, in contrast to the findings of Maton et al. (2011). Reported student satisfaction did not correlate with encountered encouragement or barriers, and barriers and encouragement were not generally associated with student ethnic and gender identity. These findings contrast with findings in earlier studies (Maton et al., 2011). A possible explanation includes low power due to sample size – future replication studies with larger sample size can aid in confirming or disconfirming these findings. Additionally, future studies could measure satisfaction with Likert scales to gauge the degree of satisfaction experienced by psychology students along lines of ethnicity and gender, as was done in previous studies (Maton et al., 2011). Likert scales were intended to be used in this project, but their

implementation introduced problems of comparison between student responses and instructor responses as well as concerns regarding questionnaire length.

### **Hypothesis 3**

Generally, minority psychology students reported less ethnic representation in psychology than non-minority psychology students, which aligns with findings from Maton et al. (2011). Controlling for reported ethnic identity, no significant correlations were found between student satisfaction and perceived ethnic representation in psychology, perceived ethnic diversity in academic environments, perceived gender diversity in academic environments, perceived barriers encountered by psychology students, or perceived encouragement encountered by psychology students, which contrast with the findings of Maton et al. (2011). Additionally, no significant correlation was found for student ethnic identity and student satisfaction, perceived ethnic and gender diversity in academic settings, perceived barriers, or perceived encouragement, also in contrast to earlier findings by the Maton et al. (2011) study. An explanation for these contrasts includes low statistical power due to small sample size, which future studies can confirm or disconfirm with larger sample sizes. As discussed for the results of Hypothesis 1, an increase in diversity in psychology programs may also account for decreased association of student ethnic identity with encountered barriers, encountered encouragement, or student satisfaction (National Center for Education Statistics, 2019; National Center for Education Statistics, 2019). Additionally, any increase in diversity may be supported by growing awareness of and sensitivity to social justice issues promoted both within American psychology and generally in society (McGinn and Crosson, 2004; Suinn et al., 2005; CEMRATT2, 2013; APA 2020; ).

## Hypothesis 4

### Perceived Ethnic Representation in Psychology

Non-minority psychology students reported a greater degree of ethnic representation in psychology than minority psychology students, aligning with the findings of Maton et al. (2011). Among undergraduates, white students seemed to express a perception of being overly represented within psychology, using phrases such as “heavily represented” to describe the representation of their ethnic identity in psychology, and stating that non-minority representation in psychology “overshadows minorities.” One White participant stated that their ethnic identity seemed to be presented as “normal” within psychology. One participant who identified as an Asian woman reported a perception that Asian ethnic identity was minimally represented in psychology, reporting little representation in lectures and class materials, but with some reported representation in textbook material. Two participants who identified as Black reported perceptions of minimal representation of Black ethnic identity in psychology, with one participant, a Black man, reporting that Black ethnic identity was represented with “not much context” in psychology and another participant, a Black woman, reporting “Caucasians tend to have a superiority complex.”

Responses among graduate psychology students also varied by ethnicity, with non-minority students reporting greater ethnic representation in psychology than minority students. White students generally reported a perception that most theorists presented in psychology materials are White, and that examples and images used in psychological materials use White individuals. One graduate student who identified as an Asian woman reported improving representation in psychology, specifically at psychological

conferences. One participant who identified as a Hispanic woman reported minimal representation of Hispanic identity in psychology, specifically within behavior analysis.

### **Perceived Gender Representation in Psychology**

Perceptions of gender representation in psychology differed by both reported gender identity and student status. With the exceptions of Graduate White women, women generally reported a perception that their gender identity was minimally represented in psychology and men generally reported a perception that they were well represented in psychology.

Undergraduate White women generally reported a perception that women were well represented in psychology, with one participant professing a perception that the integration of women in psychology has been improving over time and are now the “majority in psychology,” though the participant did not indicate if they were referring to practitioner roles, educator roles, or leadership roles. One Black man reported a perception that men are well represented in psychology, citing a perception of high inclusion of men in psychology texts. Finally, one Black woman reported a perception that women are minimally represented in psychology, expressing a perception that foundational decisions in the history of psychology were made primarily by men.

In notable contrast to undergraduate White women, graduate White women generally perceived women to be minimally represented in psychology. Accompanying commentary touched on the potential impact of age of materials on representative gender inclusion, as well as a perception that pathology research was conducted primarily on women in the past. Additionally, one participant commented that representation of

women appeared limited to white, cisgender, and heterosexual women. This may indicate that such a difference in perception may relate to a greater understanding of

One Asian woman expressed a perception that women are generally well represented but qualified her statement by expressing the perception that women are less represented than, presumably, men as authors but that women are the majority of practitioners of psychology. One Hispanic woman expressed a perception of minimal representation of women in psychology, stating that men are more likely to both possess PhDs and be represented in psychology. One White man expressed a perception that men are well represented in psychology and mentioned that most therapists he studied and viewed in video resources were male.

One possible explanation for the difference in perspectives of undergraduate and graduate White women may be student status – undergraduate non-minority women reported a perception that women were in the majority among professionals in psychology, whereas graduate non-minority women reported a perception that men were generally more visible in psychology as early innovators and as leaders in the field. This may indicate a possible growing awareness of the difference between a simple numeric majority and entrenched power structures as students become more aware of power structure dynamics in their studies (Yoder and Kahn, 1992; Sidanius et al., 1994; Goodman et al., 2004; Beckman, 2014).

### **Perceived Ethnic Diversity in Academic Environments**

Undergraduate White women generally reported that ethnic and cultural diversity is well represented in course materials, but that distance learning due to the COVID-19 pandemic may impact their perceptions of diversity within their programs and in the

general student body. One undergraduate Black woman and one undergraduate Black man both reported a positive perception of ethnic and cultural diversity within their academic environments, with the undergraduate Black man reporting that “those interested in this field seem to be diverse.” Finally, one undergraduate Asian woman reported a negative perception of ethnic and cultural diversity in her academic environment, stating that her school makes efforts to promote diversity through clubs and events, but that more effort and general interest is needed. Graduate White women, in contrast to undergraduate White women, reported a negative perception of ethnic and cultural diversity within their academic environments, with commentary asserting that student diversity is not reflected by instructor diversity, and that cohorts are generally white and middle-to-upper class. One graduate Hispanic woman reported a negative perception of ethnic and cultural diversity in her academic environment, stating that there were no faculty of color in her program and few students of color. One graduate White man also reported a negative perception of ethnic and cultural diversity in his academic environment, stating that professors in his academic environment were exclusively White and that students were “almost exclusively native-born White people.” A graduate Asian woman reported a positive perception of ethnic diversity in her academic environment, in contrast to the participating undergraduate Asian woman.

A possible explanation for differences in reported perceptions of ethnic representation may be geographic location of responding participants. Data were collected from students attending institutions of varying geographic location, which may impact the ethnic demographics of the academic environments in which participants were located. To minimize the collection of potential participant identifiers, institution data

were not collected for this project. Future studies could collect information from single institutions to control for the impact of geographic variance in data collection.

Additionally, the COVID-19 pandemic is likely to have impacted the physical proximity many participants had with their educational institutions at the time of participation.

Future replication following the conclusion of pandemic restrictions is likely necessary to confirm or disconfirm the impact of the pandemic on participant response to this and other questionnaire items asking for student perceptions of the demographic makeup of physical campuses.

### **Perceived Gender Diversity in Academic Environments**

Undergraduate White women generally reported positive perceptions of gender diversity in their academic environments, expressing perceptions that women generally outnumber men among students, as well as a perception that instructor ratios are more generally gender diverse than among students. One undergraduate Black woman and one undergraduate Black man expressed positive perceptions of gender diversity in their academic environments, with the undergraduate Black man expressing a perception that there seemed to be a “great mix of gender representation on campus.” One undergraduate Asian woman also expressed a positive perception of gender diversity on campus but qualified her report by saying “I don’t think about it much.”

Graduate White women, in contrast to undergraduate White women, generally reported a negative perception of gender diversity in their academic environment. Like undergraduate White women, graduate White women reported that women generally outnumber men in their programs. Interestingly, this was reported as an explanation for negative perceptions of gender diversity. A graduate Asian woman reported a positive

perception of gender diversity in her academic environment, though she qualified her report with the phrase “somewhat.” Similarly, a graduate Hispanic woman reported a positive perception of gender diversity, phrasing her report as “It’s okay.” A graduate White man reported a positive perception of gender diversity, adding that he perceived there to be a “good mix of genders and sexual preferences” in his academic environment.

### **Mentoring by Instructors**

Apart from one undergraduate White woman, all undergraduate psychology students reported that they have not been mentored by instructors of psychology. This generally contrasts with responses from graduate psychology students, who reported having been mentored by instructors of psychology. All graduate psychology students, apart from one White man, reported having been mentored by psychology instructors. A possible explanation for this difference in reported experience may be the greater emphasis on mentoring placed upon graduate education than for undergraduate education, with mentoring relationships often formalized at the graduate level, examples of which include assistantships and thesis advisory committees.

### **Encouragement to Interact with Instructors**

Undergraduate White women generally reported that they have not been encouraged to interact with instructors. One undergraduate Black man stated that he had encountered encouragement to interact with instructors, but one undergraduate Black woman and one undergraduate Asian woman each reported that they had not encountered encouragement to interact with faculty. In contrast to undergraduate White women, graduate White women generally reported that they have encountered encouragement to interact with instructors, but one graduate White man reported that he had not

encountered special assistance. In contrast to the undergraduate Asian woman, a graduate Asian woman reported that she had been encouraged to interact with instructors, as did one graduate Hispanic woman. Overall, undergraduate psychology students generally reported that they have not been encouraged to interact with instructors, and graduate psychology students unilaterally reported that they have been encouraged to interact with instructors.

### **Satisfaction with Psychological Studies**

All responding undergraduate psychology students reported being satisfied with their psychological studies, with one undergraduate Asian woman qualifying her report with the phrase “for the most part.” Graduate White women and a graduate Hispanic woman reported satisfaction with their psychological studies, but a graduate White man reported being unsatisfied with his psychological studies, qualifying his response with the phrase “not particularly.” No follow-up question was asked, thus no direct qualifiers for reported satisfaction were provided. Future refinement of this instrument could include a follow-up item asking for elaboration. Such requested elaboration might allow for more direct thematic analysis of reported psychology student satisfaction.

### **Encouragement or Assistance**

Undergraduate White women generally reported encountering no special encouragement or assistance in their academic career. Follow-up statements indicated that distance learning could impact this perception. Additionally, one undergraduate Asian woman reported encountering no special encouragement or assistance in her academic career except for a single class that included a discussion about potential career choices. An undergraduate Black man reported encountering encouragement from his

professors and academic advisors. In contrast to undergraduate White woman, graduate White women generally reported encountering encouragement and assistance, although one participant reported a lack of close and personal relationships with her professors like relationships she enjoyed at a smaller private institution during her undergraduate study. In contrast to the response of the undergraduate Asian woman, a graduate Asian woman reported encountering encouragement or assistance, but did not elaborate on the nature of the encouragement or assistance. A graduate Hispanic woman reported encountering encouragement or assistance, stating: “My advisors have been very supportive in my studies and my research. When things haven’t gone as planned, they provide comfort saying things like ‘I have other ideas for you, we’ll figure something out.’” A graduate White man reported that he has not encountered special encouragement or assistance, expressing a perception that he has been left to “fend for [himself] and figure it out.”

#### **Association of Encouragement or Assistance with Ethnic or Gender Identity**

No responding undergraduate or graduate psychology students reported associating encountered encouragement or assistance with their reported ethnic identities, and apart from one undergraduate White woman no students reported associating encountered encouragement with their reported gender identities. The undergraduate White woman who reported an association of encountered encouragement with her reported gender identity reported that she “was encouraged to pick a more ‘female-oriented’ profession or to join the Army.”

#### **Encouragement to Participate in Research**

All responding undergraduate psychology students reported being encouraged to participate in research. Graduate White women generally reported encountering

encouragement to participate in research, but their responses were not unilaterally positive. A graduate White man reported encountering encouragement to participate in research, as did a graduate Asian woman and a graduate Hispanic woman. Future refinement of this instrument might include follow-up items requesting qualifiers for positive or negative responses to items regarding opportunities for participating in or presenting research, so that student perspectives on research opportunities might be thematically analyzed in a more direct fashion.

### **Encouragement to Present Research**

Among responding undergraduates, only one White woman reported encountering encouragement to present papers, though the nature of her response seemed to introduce ambiguity as to her understanding of what qualifies as a professional meeting. Graduate White women generally reported that they were not encouraged to present papers, as did one graduate White man. A graduate Asian woman and a graduate Hispanic woman both reported encountering encouragement to present papers.

### **Encouragement to Co-Author Research or Book Chapters**

Apart from two exceptions, undergraduate White women generally reported that they have not encountered encouragement to co-author research or book chapters. One White woman qualified her report by stating that her opportunity to co-author research was interrupted by the COVID-19 pandemic. All other reporting undergraduate psychology students reported that they have not encountered encouragement to co-author research or book chapters. Like undergraduate White women, graduate White women generally reported that they have not encountered encouragement to co-author research. Additionally, a graduate White man reported that he has not encountered encouragement

to co-author research. A graduate Asian woman reported encountering encouragement to co-author research, in contrast to the undergraduate Asian woman. Finally, a graduate Hispanic woman also reported encountering encouragement to co-author research.

### **Barriers or Challenges**

Undergraduate White women generally reported encountering no special barriers or challenges in their academic career, with one exception mentioning financial difficulties and familial discouragement. An undergraduate Black man and undergraduate Black woman both reported encountering no special barriers in their academic career. An undergraduate Asian woman chose not to respond. Similar to undergraduate White women, graduate White women generally reported encountering no special barriers to their academic pursuits, with one exception stating that they encountered general financial difficulties that she did not perceive as abnormal, as well as exposure to unsupportive behavior within her cohort. A graduate Asian woman reported encountering no special barriers to her academic goals, but a graduate Hispanic woman and a graduate White man each reported encountering special barriers to their academic goals. The graduate Hispanic woman reported being told by her undergraduate advisor that she was not “cut out” for graduate study. In a qualifying statement, the graduate White man reported limited communication within his program, as well as general financial difficulties. Overall, general financial difficulties were the most common barrier reported, followed by perceived absent support and perceived active discouragement.

### **Association of Barriers or Challenges with Ethnic or Gender Identity**

No responding undergraduate or graduate psychology students reported associating any encountered barriers to their academic goals with their reported ethnic

identity. Similarly, undergraduate psychology students generally did not report associating encountered barriers with their reported gender identity. One exception, a White woman, reported being compared by her family to women who were relatives and had failed in their efforts to become psychologists. Similarly, graduate psychology students generally did not report associating encountered barriers with their reported gender identity. One exception, also a White woman, reported a perception that personal self-appraisals were pejoratively interpreted by others through a stereotypically feminine framework, and were thus valued as reflective of negative self-talk.

### **Hypothesis 5**

#### **Perceived Ethnic Diversity in Academic Environments**

Like psychology students, psychology instructor responses were divided on their perceptions of an appropriate degree of ethnic diversity in their academic environments. Instructors who were White women were evenly divided in their responses, with one qualifying statement expressing the perception that student diversity is not reflected in diversity among instructors, echoing a previous student sentiment. Additional statements expressed perceptions that local representation is met to a greater degree than national representation, and that psychology generally attracts a higher percentage of Black and Hispanic students than other subjects. Instructors who were White men expressed the perception that cultural diversity in their academic environments is not adequate but is improving. Qualifying statements expressed perceptions that their specific programs were generally more gender diverse than ethnically diverse, and that minority males specifically were underrepresented in psychology.

### **Perceived Gender Diversity in Academic Environments**

Psychology students and psychology instructors generally agreed that their academic environments featured an appropriate degree of gender diversity. One instructor, a White woman, echoed an earlier student perception that women are the “majority” in the field, and another instructor, a White man, similarly expressed the perception that there is broad representation of women within psychology. Neither instructor clarified their statement by indicating what roles they perceived women to be currently fulfilling within psychology.

### **Mentoring of Psychology Students**

Responding psychology instructors generally indicated that they either chose or were expected to mentor undergraduate students, generally contrasting with responses from undergraduate psychology students indicating that most respondents were not mentored by instructors or encouraged to interact with instructors. Graduate psychology students generally reported that they were personally mentored by or encouraged to interact with psychology instructors, which aligns with psychology instructor reports indicating that instructors were generally required or chose to mentor graduate students.

### **Perceived Encouragement or Assistance Encountered by Psychology Students**

Psychology instructors generally reported a perception that psychology students have expressed encountering encouragement or assistance in their psychological studies. Examples of reported encouragement or assistance included extra time provided for exams, modifications made for blind students, and accommodations provided through a campus Disability Resource Center. Forms of encountered encouragement and assistance reported by students seemed to generally differ, with reported forms of encouragement

generally focusing on encouragement received from professors and advisors, encouragement received from former teachers, and personal connections made during the overall course of study.

### **Perceived Association by Psychology Students of Encountered Encouragement or Assistance with Student Ethnic and Gender Identity**

Overall, psychology students did not generally associate assistance or encouragement they encountered with either their ethnic or gender identities, and psychology instructors generally reported a perception that students did not express a belief that encountered forms of encouragement or assistance were related to their ethnic or gender identities.

### **Perceived Encouragement to Participate in and Present Research Extended to Students**

Responding psychology instructors generally indicated a perception of encouraging undergraduate and graduate psychology students to participate in research. These responses are generally reflected in responses from both undergraduate and graduate psychology students, who generally reported encountering encouragement to participate in research. Psychology instructors generally indicated perceptions of encouraging undergraduate psychology students to present papers, contrasting with general undergraduate student reports expressing perceptions that they have not encountered encouragement from instructors to present papers. General instructor reports that expressed perceptions of encouraging graduate psychology students to present papers generally aligned with graduate psychology student reports of encountering such encouragement, however.

### **Perception of Barriers or Challenges Encountered by Students**

Responding psychology students generally reported that they have not encountered barriers to their academic goals. Exceptions to these responses generally related to interpersonal discouragement and general financial difficulties. Responding psychology instructors generally reported that they have encountered students who have reported barriers to their academic goals. In contrast to responses from psychology students, psychology instructors generally reported that barriers encountered by students were generally reported in the form of encountered microaggressions and disability limiting access to course materials. One area of agreement between psychology students and psychology instructors were encountered barriers in the form of limited or absent support for students as they pursue their academic goals.

### **Limitations and Future Directions**

Small sample size was a limitation for the quantitative hypotheses for this project. For Hypotheses 1, 2, and 3, small sample size reduced the power of the statistical models, although independent samples *t* tests, or Welch *t* tests, were used to compensate for reduced power for hypothesis 1. Sample size was impacted by a number of factors during the data collection process. Time constraints limited the duration for data collection. Additionally, there was no effective method of screening beyond stating preferred criteria for participation, thus limiting the number of participants who met participation criteria once overall participation met the sample size of 100 approved by MTSU IRB. Future studies with less restrictive timeframes for data collection can possibly overcome this issue, building sample sizes with adequate statistical power and meeting assumptions for further statistical testing.

Thematic analysis of participant responses generally seems to indicate that participating minority and non-minority students are aware of historic injustice and discrimination based on ethnic/racial and gender identity and are sensitive to the realities of discrimination. However, minority student participants generally do not associate special barriers or encouragement with their ethnic or gender identity. Several responses seem to indicate a perception that inclusion and representation in academia generally and psychology specifically is improving or has improved, possibly indicating a broader improvement of academic and psychological diversity and representation in the time since the Maton et al. (2011) study was conducted. Further refinement of the instruments used in this project to improve statistical power and broaden qualitative insight will be necessary to substantiate this postulation. Thematic analysis of the original Maton et al. (2011) instrument could also help in developing a comparative timeline to further aid in determining whether the general experiential perceptions of minority and non-minority psychology students are shifting over time.

Refinement of the instrument is necessary to build validity for its use in a future form. This instrument, though inspired by the instrument used by Maton et al. (2011), was implemented after it was determined to possess sufficient face validity. Similarly, the instrument used in the Maton et al. (2011) study was also implemented after it was determined to possess sufficient face validity. Building suitable validity is necessary to develop an instrument or multiple instruments that adequately gauge the experiences of minority and non-minority psychology students, and potentially gauge the effectiveness of psychology's efforts to diversify the demographics of its professional and leadership populations over time. Considering the call from APA to actionably combat inequality

and promote social justice (Abrams, 2020; APA, 2020a; APA 2020b; Evans, 2020) as well as growing public resistance to social injustice (Buchanan et al., 2020; Burch et al., 2020; Young and Brooks, 2008), it has become important to develop an effective means of charting the progress of American psychology in increasing diversity within the field. This effort should be both quantitative and qualitative, combining observable measurements of the field's progress with subjective reflection of the impact of initiatives to build a diverse workforce and serve a changing population.

### **Conclusions**

Generally, minority students reported perceiving less ethnic representation in psychology than non-minority students. Women, in particular women who were graduate students, generally perceived less gender representation in psychology than men. Graduate students generally perceived less ethnic diversity in their academic environments than undergraduate students did, and generally reported encountering more opportunities for mentorship and research experience than did undergraduates. Instructors generally reported offering nearly equal opportunities for mentorship to undergraduate and graduate students, contrasting with responses from undergraduates. Additionally, instructors generally interpreted barriers faced by students through an academic context, contrasting with the more interpersonal nature of encountered barriers reported by students. However, reported perceptions between undergraduate students, graduate students, and instructors of psychology generally aligned more often than they diverged. Refinement of the survey instruments should likely be a continual and adaptive process to adequately reflect the experiences, perceptions, and needs of the increasingly diverse population psychology is intended to serve.

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APPENDICES

## APPENDIX A

## STUDENT SURVEY INSTRUMENT

**Section A**

1. What year in college are you? (How many years have you been in college?)
2. Are you an undergraduate or graduate student?
3. What is your current major? (Please be specific.)
4. What is your current minor? (If applicable.)
5. How would you describe your ethnic/racial identity? Some people might describe themselves as White, European American, Black, African American, Asian, Asian American, Native American, Native Alaskan, or Pacific Islander. These are just examples, however; please use any terminology that you believe adequately and appropriately describes you, and that you feel comfortable with using.
6. How would you describe your gender identity? Some people may feel comfortable using terminology that references biological sex, such as male, female, or intersex. Others may feel more comfortable using terminology that references the social construct of gender, such as man, woman, transgender, or non-binary. These are only a limited number of examples, however; please use any terminology that you believe adequately and appropriately describes you, and that you feel comfortable with using.
7. Do you intend to pursue employment after completing your degree? If so, doing what?
8. Do you intend to pursue additional education after completing your degree? If so, in what field, and to what level?

**Section B**

- 1a. How do you think your ethnic/racial group is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?
- 1b. Please explain your answer. We are very interested in your perspective on this.
  
- 2a. How do you think your gender group is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?
- 2b. Please explain your answer. We are very interested in your perspective on this.
  
- 3a. Do you believe that there is an appropriate degree of cultural diversity within your current academic environment?
- 3b. Please explain your answer. We are very interested in your perspective on this.

- 4a. Do you believe that there is an appropriate degree of gender diversity within your current academic environment?
- 4b. Please explain your answer. We are very interested in your perspective on this.
- 5a. In your present undergraduate or graduate program, have you been mentored by a faculty member?
- 5b. How many faculty members have you worked with?
6. In your present undergraduate or graduate program, have you been encouraged to interact with any faculty members on campus?
7. Do you feel satisfied, in general, with your studies in psychology?
- 8a. Have you encountered encouragement and/or special assistance in relation to pursuing your undergraduate or graduate degree?
- 8b. Please explain your answer. We are very interested in your perspective on this.
- 8c. Did you associate this encouragement and/or special assistance with your ethnic/racial identity? Please provide detail or explanation if possible.
- 8d. Did you associate this encouragement and/or special assistance with your gender identity? Please provide detail or explanation if possible.
- 9a. In your present undergraduate or graduate program, have you been encouraged to participate in research?
- 9b. In your undergraduate/graduate program, how many faculty members/instructors have you worked with?
- 10a. In your present undergraduate or graduate program, have you been encouraged to present papers at professional meetings?
- 10b. How many faculty members/instructors have encouraged you to present papers at professional meetings?

- 11a. In your present undergraduate or graduate program, have you been encouraged to co-author research articles or book chapters?
- 11b. How many faculty members/instructors have you worked with in co-authoring a research article or book chapter?
- 12a. How do you believe your ethnic/racial identity is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?
- 12b. Please explain your answer. We are very interested in your perspective on this.
- 13a. How do you believe your gender identity is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?
- 13b. Please explain your answer. We are very interested in your perspective on this.
- 14a. Do you believe there is an appropriate degree of cultural diversity within your current program?
- 14b. Please explain your answer. We are very interested in your perspective on this.
- 15a. Have you encountered special negative challenges, barriers, or unpleasant reactions in relation to pursuing your undergraduate or graduate degree?
- 15b. Please explain your answer. We are very interested in your perspective on this.
- 15c. Did you associate any of these special negative challenges, barriers, or unpleasant reactions with your ethnic/racial identity? Please provide specific examples if possible.
- 15d. Did you associate any of these special negative challenges, barriers, or unpleasant reactions with your gender identity? Please provide specific examples if possible.

## APPENDIX B

## FACULTY SURVEY INSTRUMENT

**Section A**

1. How many years have you been teaching at the college or university level?
2. Do you primarily work with undergraduate students, graduate students, or an equal proportion of both?
3. What major(s) in your department do you offer classes in?
4. What minor(s) in your department do you offer classes in?
5. How would you describe your ethnic/racial identity?
6. How would you describe your gender identity?
7. Does your program focus on developing student employability?
8. Does your program focus on preparing students for further academic study following graduation?

**Section B**

- 1a. In your experience and estimation, how well do you think racial/ethnic groups are generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?
- 1b. Please provide more detail here. We are very interested in your perspective on this.
  
- 2a. In your experience and estimation, how well do you think gender identity is generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?
- 2b. Please provide more detail here. We are very interested in your perspective on this.
  
- 3a. Does the ethnic/racial diversity of your program reflect the diversity of the surrounding community or the general population?
- 3b. Please explain your answer.
- 3c. Does the gender diversity of your program reflect the diversity of the surrounding community or the general population?
- 3d. Please explain your answer.

- 4a. In your time teaching psychology, do you or have you ever mentored undergraduate students?
- 4b. In your time teaching psychology, do you or have you mentored graduate students?
- 4c. How many undergraduate students have you worked with or mentored?
- 4d. How many graduate students have you worked with or mentored?
- 5a. In your faculty or teaching position, are you expected to work with or mentor undergraduate students?
- 5b. In your faculty or teaching position, are you expected to work with or mentor graduate students?
- 6a. Have any students, graduate or undergraduate, ever described encouragement and/or special assistance in relation to their education?
- 6b. If so, what specific examples come to mind?
- 6c. In your estimation, did the students associate this encouragement and/or special assistance with their ethnic/racial identity? Please be specific where possible.
- 6d. In your estimation, did the students associate this encouragement and/or special assistance with their gender identity? Please be specific where possible.
- 7a. In your role as faculty/instructor, have you mentored undergraduate students in the context of research?
- 7b. In your role as faculty/instructor, have you mentored graduate students in the context of research?
- 7c. How many undergraduate students have you worked with or mentored?
- 7d. How many graduate students have you worked with or mentored?
- 8a. In your time teaching psychology, have you supported undergraduate students in presenting papers at professional conferences and meetings?
- 8b. In your time teaching psychology, have you supported graduate students in presenting papers at professional conferences and meetings?
- 8c. How many undergraduate students have you supported in presenting papers at professional conferences and meetings?
- 8d. How many graduate students have you supported in presenting papers at professional conferences and meetings?

- 9a. Do you include or have you included undergraduate students in co-authoring research articles or book chapters?
- 9b. Do you include or have you included graduate students in co-authoring research articles or book chapters?
- 9c. How many undergraduate students have you worked with in co-authoring a research article or book chapter? Please also include the number of articles and book chapters you have worked on with each student.
- 9d. How many graduate students have you worked with in co-authoring a research article or book chapter? Please also include the number of articles and book chapters you have worked on with each student.
- 10a. In your experience and estimation, how well do you think racial/ethnic groups are generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?
- 10b. Please provide more detail here. We are very interested in your perspective on this.
- 11a. In your experience and estimation, how well do you think gender identity is generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?
- 11b. Please provide more detail here. We are very interested in your perspective on this.
- 12a. Do you believe there is an appropriate degree of cultural diversity among the undergraduate students currently in your psychology program?
- 12b. Please explain your answer. We are very interested in your perspective on this.
- 13a. Do you believe there is an appropriate degree of cultural diversity among the undergraduate students currently in your psychology program?
- 13b. Please explain your answer. We are very interested in your perspective on this.
- 14a. Have any students, graduate or undergraduate, ever described special negative challenges, barriers, or unpleasant reactions in relation to their education?
- 14b. If so, what specific examples come to mind?
- 14c. In your estimation, did the students associate these special negative challenges, barriers, or unpleasant reactions with their ethnic/racial identity? Please provide specific examples if possible.
- 14d. In your estimation, did the students associate these special negative challenges, barriers, or unpleasant reactions with their gender identity? Please provide specific examples if possible.

## APPENDIX C

## CODING SCHEME

**Domain: Representation**

Category	Description	Shorthand
Overly Represented	Any indication that the participant's racial/ethnic or gender group is represented to a degree that exceeds the group's size in the general population; participants might use phrases such "overly represented," "heavily represented," or use language that indicates that their identified group is disproportionately represented. <b>Note:</b> for questions relating to gender, this category will be applied whenever it is explicitly indicated that a gender group comprises more than roughly half of the field or immediate environment.	OVER REP
Well Represented	Any indication in a response that the participant's identified racial/ethnic or gender group is perceived to be strongly present in the participant's environment; participant might use phrases such as "well represented," "accurately represented," "broadly represented," or "I am in the majority."	WELL REP
Improving Representation	Participant uses language that indicates that representation of their identified ethnic/racial or gender group or diverse representation in general has improved relative to past representation; participant may use language such as "improving" or "it has gotten better."	IMP
Somewhat Represented	Any indication in a response that the participant's identified racial/ethnic or gender group is represented to a degree that is neither minimal nor fully representative of their group's demographic size in the general population; participants might use phrases such as "moderately represented," "somewhat represented," "maybe," "probably," or "it could be better."	SOME REP
Minimally Represented	Participant uses language that indicates that their identified ethnic/racial or gender group is minimally represented or even not represented; participant may use language such as "not represented" or "not at all."	MIN REP

**Domain: Environment**

Category	Description	Shorthand
Discrimination	Participant uses language indicating the occurrence of purposeful discrimination based on any factor, including but not limited to ethnic/racial identity, gender identity, or disability. <b>Note:</b> references to a lack of accommodation for disability would refer in this project to Environmental circumstances, and would be coded as such. Discrimination, for the purposes of this project, must be intentional to be coded as Discrimination.	DIS
Environment	Participant response indicates support or barrier due to general external circumstances; may reference lack of access to resources, technological issues or issues related to the COVID-19 pandemic (including being separated from campus or having to rely on an online curriculum)	ENV
Faculty	Participant response indicates they received encouragement or discouragement from instructors; may use phrases such as "faculty is very supportive" or "advisor did not support me."	FAC
Family	Participant response indicates they received encouragement or discouragement from family; may include phrases such as "family is very supportive" or "family encouraged me to pursue something more lucrative."	FAM
Finances	Participant response indicates support or barrier due to financial circumstances; may use phrases such as "family has money" or "financial burden."	FIN
Peers	Participant response indicates they received support, encouragement, or discouragement from peers, including their cohort; may use phrases such as "cohort is very supportive," "cohort is not very supportive," "friends are very supportive."	PEER
Professional	Participant uses language referencing contact, either in the form of support or discouragement, from professionals in their desired field.	PRO
Did Not Respond	Participant does not respond, does not understand, or does not logically reflect the question being asked.	DNR

### Domain: Presentation

Category	Description	Shorthand
Positive Presentation	Participant uses language that indicates that their identified ethnic/racial or gender group is presented in a positive or constructive way within the field of psychology or within their immediate environment; participant may refer to disproportionate presence or disproportionate impact of their group in fundabehavioral aspects of psychology's history, research, and direction.	POS PRES
Improving Presentation	Participant uses language that indicates that subjective presentation of their identified ethnic/racial or gender group or positive/constructive presentation in general has improved relative to past presentation; participant may use language such as "could be more," "improving" or "it has gotten better."	IMP PRES
Negative Presentation	Participant uses language that indicates that their identified ethnic/racial or gender group is portrayed in a negative or destructive way within the field of psychology; participant may refer to disproportionate use of their group in research related to psychopathology or to media or texts in relation to dysfunctional behavior, or may refer to their group's minimal presence or impact in the field or within their environment.	NEG PRES
Not Presented	Participant uses language that indicates that their identified ethnic/racial or gender group is not presented within the field of psychology or in their immediate environment. Participant may use phrases such as "it is not presented" or "we are not present."	NOT PRES
Did Not Respond	Participant does not respond, does not understand, or does not logically reflect the question being asked.	DNR

### Additional Qualifiers

(To be used for responses to exploratory questions asking for elaboration on previous responses.)

Category	Description	Shorthand
White Dominated	Participant uses language that indicates that the field is specifically controlled or managed by White people; participants may use phrases such as "white dominated," "mostly Caucasian," "overwhelmingly White."	WHITE DOM
Male Dominated	Participant uses language that indicates that the field is specifically controlled or managed by men; participants may use phrases such as "male dominated," "dominated by men," or "overwhelmingly male."  <b>Note:</b> this category refers specifically to <i>control</i> exerted by men, and is distinguished from a simple majority population of men	MALE DOM
Female Dominated	Participant uses language that indicates that the field is specifically controlled or managed by women; participants may use phrases such as "female dominated," "dominated by women," or "overwhelmingly female."  <b>Note:</b> this category refers specifically to control exerted by women, and is distinguished from a simple majority population of women.	FEM DOM
Majority Male	Participant uses language indicating that the gender ratio of any environment is composed of a majority of men.	MAJ MALE
Majority Female	Participant uses language indicating that the gender ratio of any environment is composed of a majority of women.	MAJ FEM
Unbalanced Student/Faculty Ratio	Participant responses indicate that the demographic makeup of the student body and faculty is not proportional; participant may use terms indicating that one group is more diverse than the other.	USFR
Did Not Respond	Participant does not respond, does not understand, or does not logically reflect the question being asked.	DNR

Note: for responses that are variations on "see previous response," use the code for which criteria are met by the indicated response. If indicated previous response does not logically reflect the question being asked, then use the code "Did Not Respond."

## APPENDIX D

## CODING PLAN

## Coding Plan for Student Responses

Domain	Representation	Environment	Presentation
Questions	1a. How do you think your ethnic/racial group is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?	8a. Have you encountered encouragement and/or special assistance in relation to pursuing your undergraduate or graduate degree?	12a. How do you believe your ethnic/racial identity is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?
	1b. Please explain your answer. We are very interested in your perspective on this.	8b. Please explain your answer. We are very interested in your perspective on this.	12b. Please explain your answer. We are very interested in your perspective on this.
	2a. How do you think your gender group is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?	8c. Did you associate this encouragement and/or special assistance with your ethnic/racial identity? Please provide detail or explanation if possible.	13a. How do you believe your gender identity is generally represented within psychology (such as in textbooks, course materials, lectures, etc.)?
	2b. Please explain your answer. We are very interested in your perspective on this.	8d. Did you associate this encouragement and/or special assistance with your gender identity? Please provide detail or explanation if possible.	13b. Please explain your answer. We are very interested in your perspective on this.
	3a. Do you believe that there is an appropriate degree of cultural diversity within your current academic environment?	15a. Have you encountered special negative challenges, barriers, or unpleasant reactions in relation to pursuing your undergraduate or graduate degree?	14a. Do you believe there is an appropriate degree of cultural diversity within your current program?
	3b. Please explain your answer. We are very interested in your perspective on this.	15b. Please explain your answer. We are very interested in your perspective on this.	14b. Please explain your answer. We are very interested in your perspective on this.
	4a. Do you believe that there is an appropriate degree of gender diversity within your current academic environment?	15c. Did you associate any of these special negative challenges, barriers, or unpleasant reactions with your gender identity? Please provide specific examples if possible.	4a. Do you believe that there is an appropriate degree of gender diversity within your current academic environment?
	4b. Please explain your answer. We are very interested in your perspective on this.		4b. Please explain your answer. We are very interested in your perspective on this.

### Coding Plan for Instructor Responses

Domain	Representation	Environment	Presentation
<b>Questions</b>	1a. In your experience and estimation, how well do you think racial/ethnic groups are generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?	4a. In your time teaching psychology, do you or have you ever mentored undergraduate students?	10a. In your experience and estimation, how well do you think racial/ethnic groups are generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?
	1b. Please provide more detail here. We are very interested in your perspective on this.	4b. In your time teaching psychology, do you or have you ever mentored graduate students?	10b. Please provide more detail here. We are very interested in your perspective on this.
	2a. In your experience and estimation, how well do you think gender identity is generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?	5a. In your faculty or teaching position, are you expected to work with or mentor undergraduate students?	11a. In your experience and estimation, how well do you think gender identity is generally presented within psychology (such as in textbooks, course materials, lectures, online, etc.)?
	2b. Please provide more detail here. We are very interested in your perspective on this.	5b. In your faculty or teaching position, are you expected to work with or mentor graduate students?	11b. Please provide more detail here. We are very interested in your perspective on this.
	3a. Does the ethnic/racial diversity of your program reflect the diversity of the surrounding community or the general population?	6a. Have any students, graduate or undergraduate, ever described encouragement and/or special assistance in relation to their education?	12a. Do you believe there is an appropriate degree of cultural diversity among the undergraduate students currently in your psychology program?
	3b. Please explain your answer.	6b. If so, what specific examples come to mind?	12b. Please explain your answer. We are very interested in your perspective on this.
	3c. Does the gender diversity of your program reflect the diversity of the surrounding community or the general population?	6c. In your estimation, did the students associate this encouragement and/or special assistance with their ethnic/racial identity? Please be specific where possible.	
	3d. Please explain your answer.	14a. Have any students, graduate or undergraduate, ever described special negative challenges, barriers, or unpleasant reactions in relation to their education?	
		14b. If so, what specific examples come to mind?	
		14c. In your experience and estimation, did the students associate these special negative challenges, barriers, or unpleasant reactions with their ethnic/racial identity? Please provide specific examples if possible.	
		14d. In your estimation, did the students associate these special negative challenges, barriers, or unpleasant reactions with their gender identity? Please provide specific examples if possible.	

## APPENDIX E

## TABLE OF CODING VALUES

Codes with Numerical Value			
Domain: Representation		Domain: Presentation	
Code	Value	Code	Value
OVERREP	5	POS PRES	4
WELL REP	4	IMP PRES	3
IMP REP	3	NEG PRES	2
SOME REP	2	NOT PRES	1
MIN REP	1		

  

Codes with Thematic Value	
Domain: Environment	Additional Qualifiers
DIS	WHITE DOM
ENV	MALE DOM
FAC	FEM DOM
FAM	MAJ MALE
FIN	MAJ FEM
PEER	USFR
PRO	

## APPENDIX F

## INTER-CODER RELIABILITY LOG

**PRIMARY CODER:** Sean Ganus

**SECONDARY CODER:** Myra Pennington

**PARTICIPANT RESPONSE IDENTIFIERS**

Participant responses are referenced by item number, followed by participant status (U = undergraduate, G = graduate, I = instructor) and participant number by order of participation in parentheses. For example, Undergraduate Participant 7's response to item 1a would be identified as "1a (U7)."

**Results of inter-rated consensus are indicated by the following codes:**

**OC (Original Code)** – refers to code applied originally by the primary coder

**SC (Suggested Code)** – refers to code applied originally by the secondary coder

**NC (New Code)** – refers to code applied originally during collaborative review between the primary coder and the secondary coder

**ITEMS TO COMPARE – STUDENT SURVEYS**

**Stat Items:** 1a, 2a, 12a, 13a

**Total Stat Items (Across 5 Respondents):** 20

**Narrative Items:** 1b, 2b, 3b, 4b, 8b, 12b, 13b, 14b, 15b

**Total Narrative Items (Across 5 Respondents):** 45

**Total Student Items Overall (Across 5 Respondents):** 65

**ITEMS TO COMPARE – INSTRUCTOR SURVEYS**

**Stat Items:** 1a, 2a, 10a, 11a

**Total Stat Items (Across 3 Respondents):** 12

**Narrative Items:** 1b, 2b, 3b, 3d, 6d, 10b, 11b, 12b, 13b, 14b

**Total Narrative Items (Across 3 Respondents):** 30

**Total Instructor Items Overall (Across 3 Respondents):** 42

**Total Survey Items Overall (All Participants):** 107

**PHASE 1: INITIAL COMPARISON****Student Stat Item Disputed:** 1a (U2)**Total in Agreement:** 19 (out of 20)**Student Stat Percent Agreement:** 95**Student Narrative Item Disputed:** 4b (U9), 8b (U2), 8b (U9), 15b (U9), 1b (G7), 2b (G7), 3b (G7), 4b (G2), 14b (G7)**Total in Agreement:** 36 (out of 45)**Student Narrative Percent Agreement:** 80**Student Inter-Coder Total Number in Agreement:** 55**Student Percent Agreement:** 84.62**Instructor Stat Item Disagreement:** 10a (I9), 11a (I3), 11a (I9)**Total in Agreement:** 9 (out of 12)**Instructor Stat Percent Agreement:** 75**Instructor Narrative Item Disputed:** 1b (I3), 2b (I3), 3b (I9), 3d (I9)**Total in Agreement:** 26**Instructor Narrative Percent Agreement:** 86.67**Instructor Inter-Coder Total Number in Agreement:** 35**Instructor Percent Agreement:** 83.33**Overall Inter-Coder Number in Agreement:** 90**Overall Inter-Coder Percent Agreement:** 84.11

**PHASE 2: CONSENSUS REACHED****Total Number Items in Dispute: 17****Student Stat Item Disputed: 1a (U2)****Student Narrative Item Disputed: 4b (U9), 8b (U2), 8b (U9), 15b (U9), 1b (G7), 2b (G7), 3b (G7), 4b (G2), 14b (G7)****Total Student Item Number in Dispute: 10****Disputed Student Stat Items w/ Agreed Codes: OC 1a (U2)****Disputed Student Narrative Items w/ Agreed Codes: SC 4b (U9), OC 8b (U2), OC 8b (U9), OC 15b (U9), OC 1b (G7), SC 2b (G7), OC 3b (G7), SC 4b (G2), OC 14b (G7)****Percent of Previously Disputed Items w/ Consensus Reached: 100****Instructor Stat Item Disagreement: 10a (I9), 11a (I3), 11a (I9)****Instructor Narrative Item Disputed: 1b (I3), 2b (I3), 3b (I9), 3d (I9)****Total Instructor Item Number in Dispute: 7****Disputed Instructor Stat Items w/ Agreed Codes: SC 10a (I9), NC 11a (I3), SC 11a (I9)****Disputed Instructor Narrative Agreement Items w/ Agreed Codes: OC 1b (I3), OC 2b (I3), SC 3b (I9), OC 3d (I9)****Percent of Previously Disputed Items w/ Consensus Reached: 100**

## APPENDIX G

## MIDDLE TENNESSEE STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD

## APPROVAL DOCUMENTATION

<b>IRB</b> <b>INSTITUTIONAL REVIEW BOARD</b> Office of Research Compliance, 010A Sam Ingram Building, 2269 Middle Tennessee Blvd Murfreesboro, TN 37129			
<b>IRBN007 – EXEMPTION DETERMINATION NOTICE</b>			
Monday, July 20, 2020			
Protocol Title	<i>A comparison of perceptions and experiences of undergraduate students, graduate students, and faculty in University Psychology Programs</i>		
Protocol ID	20-1206		
Principal Investigator	Sean Ganus* (Student)		
Faculty Advisor	James Loveless*		
Co-Investigators	Bethany Contreras**		
Investigator Email(s)	sdg3s@mtmail.mtsu.edu; james.loveless; and bethany.contreras@unr.edu		
Department/Affiliation	Psychology* and University of Nevada, Reno**		
Dear Investigator(s),			
<p>The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the <b>EXEMPT</b> review mechanism under 45 CFR 46.101(b)(2) within the research category (2) <i>Educational Tests</i>. A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:</p>			
IRB Action	<b>EXEMPT from further IRB review***</b>	Date	7/20/20
Date of Expiration	7/31/2021		
Sample Size	100 (ONE HUNDRED)		
Participant Pool	Healthy adults (18 or older) - University students and faculty		
Exceptions	Online consent followed by internet-based survey using Qualtrics is permitted (Qualtrics links on file).		
Mandatory Restrictions	<ol style="list-style-type: none"> <li>Participants must be 18 years or older</li> <li>Informed consent must be obtained from the participants</li> <li>Identifying information must not be collected</li> </ol>		
Restrictions	<ol style="list-style-type: none"> <li>All restrictions for exemption apply.</li> <li>Mandatory active informed consent with age-verification.</li> <li>NOT approved for in-person data collection.</li> </ol>		
Approved IRB Templates	IRB Templates: Online informed consent script, recruitment emails & SONA recruitment script Non-IRB templates: NONE		
Funding	NONE		
Comments	Refer to the Post-Approval section for important COVID-19 instructions		
<p>***Although this exemption determination allows above defined protocol from further IRB review, such as continuing review, MTSU IRB will continue to give regulatory oversight to ensure compliance.</p>			
IRBN007	Version 1.1	Revision Date 05.22.2018	

### Summary of Post-approval Requirements:

The investigator(s) indicated in this notification should read and abide by all applicable post-approval conditions (refer "Quick Links" below for more information):

- PI must close-out this protocol by submitting a final report before 7/31/2021; if more time is needed to complete the data collection, the PI must request an extension. **NO REMINDRES WILL BE SENT. Failure to close-out (or request extension) may result in penalties** including cancellation of the data collected using this protocol or withholding student diploma.
- IRB approval must be obtained for all types of amendments, such as:
  - Addition/removal of subject population and sample size
  - Change in investigators
  - Changes to the research sites – appropriate permission letter(s) from may be needed if the study will be conducted at a non-MTSU location
  - Alternation to funding
- Modifications to procedures must be clearly described in an addendum request form and the proposed changes must not be incorporated without an approval
- The proposed change must be consistent with the approved protocol and comply with exemption requirements
- Research-related injuries to the participants and other events, such as, deviations & misconduct, must be reported within 48 hours of such events to [compliance@mtsu.edu](mailto:compliance@mtsu.edu).

### Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would not result in the cancellation of the protocol's eligibility for exemption. **Only THREE procedural amendment requests will be entertained per year. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel.**

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

### Post-approval IRB Actions:

Date	IRB Action(s)	IRB Comments
07/20/2020	The Faculty Advisor (FA) is given the administrative authority to make the necessary amendments to protect the health and welfare of participants and student researchers during the COVID-19 National Emergency. The FA must, however, notify the IRB (via simple emails or through standard amendment documentation) after such changes were made. The IRB will audit the amendments at a later date and will suggest remedial measures if needed.	COVID-19

### Mandatory Data Storage Requirement:

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Additionally, the Tennessee State data retention requirement may apply (refer "Quick Links" below for policy 129). Subsequently, the data may be destroyed in a manner that

maintains confidentiality and anonymity of the research subjects. **The IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board  
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: <http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>
- Exemption Procedures: <https://mtsu.edu/irb/ExemptPaperWork.php>
- MTSU Policy 129: Records retention & Disposal: <https://www.mtsu.edu/policies/general/129.php>

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129

**MIDDLE  
 TENNESSEE**  
 STATE UNIVERSITY

**IRBN007 – EXEMPTION DETERMINATION NOTICE**

Thursday, August 13, 2020

Protocol Title ***A comparison of perceptions and experiences of undergraduate students, graduate students, and faculty in University Psychology Programs***

Protocol ID **20-1206**

Principal Investigator **Sean Ganus\* (Student)**  
 Faculty Advisor **James Loveless\***  
 Co-Investigators **Bethany Contreras\*\***  
 Investigator Email(s) **sdg3s@mtmail.mtsu.edu; james.loveless; and bethany.contreras@unr.edu**  
 Department/Affiliation **Psychology\* and University of Nevada, Reno\*\***

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category (2) *Educational Tests*. A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	EXEMPT from further IRB review***	Date	7/20/20
Date of Expiration			7/31/2021
Sample Size			100 (ONE HUNDRED)
Participant Pool			Healthy adults (18 or older) - University students and faculty
Exceptions			Online consent followed by internet-based survey using Qualtrics is permitted (Qualtrics links on file).
Mandatory Restrictions			1. Participants must be 18 years or older 2. Informed consent must be obtained from the participants 3. Identifying information must not be collected
Restrictions			1. All restrictions for exemption apply. 2. Mandatory active informed consent with age-verification. 3. NOT approved for in-person data collection.
Approved IRB Templates			IRB Templates: Online informed consent script, recruitment emails & SONA recruitment script Non-IRB template: NONE
Funding			NONE
Comments			Refer to the Post-Approval section for important COVID-19 instructions

\*\*\*Although this exemption determination allows above defined protocol from further IRB review, such as continuing review, MTSU IRB will continue to give regulatory oversight to ensure compliance.

### Summary of Post-approval Requirements:

The investigator(s) indicated in this notification should read and abide by all applicable post-approval conditions (refer "Quick Links" below for more information):

- PI must close-out this protocol by submitting a final report before 7/31/2021; if more time is needed to complete the data collection, the PI must request an extension. **NO REMINDRES WILL BE SENT. Failure to close-out (or request extension) may result in penalties** including cancellation of the data collected using this protocol or withholding student diploma.
- IRB approval must be obtained for all types of amendments, such as:
  - Addition/removal of subject population and sample size
  - Change in investigators
  - Changes to the research sites – appropriate permission letter(s) from may be needed if the study will be conducted at a non-MTSU location
  - Alternation to funding
- Modifications to procedures must be clearly described in an addendum request form and the proposed changes must not be incorporated without an approval
- The proposed change must be consistent with the approved protocol and comply with exemption requirements
- Research-related injuries to the participants and other events, such as, deviations & misconduct, must be reported within 48 hours of such events to [compliance@mtsu.edu](mailto:compliance@mtsu.edu).

### Post-approval Protocol Amendments:

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would not result in the cancellation of the protocol's eligibility for exemption. **Only THREE procedural amendment requests will be entertained per year. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel.**

Date	Amendment(s)	IRB Comments
08/13/2020	Minor errors/omissions were corrected in the survey/instruments.	IRBA2021-170

### Post-approval IRB Actions:

Date	IRB Action(s)	IRB Comments
07/20/2020	The Faculty Advisor (FA) is given the administrative authority to make the necessary amendments to protect the health and welfare of participants and student researchers during the COVID-19 National Emergency. The FA must, however, notify the IRB (via simple emails or through standard amendment documentation) after such changes were made. The IRB will audit the amendments at a later date and will suggest remedial measures if needed..	COVID-19

### Mandatory Data Storage Requirement:

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Additionally, the Tennessee State data retention requirement may apply (refer "Quick Links" below for policy 129). Subsequently, the data may be destroyed in a manner that

Institutional Review Board

Office of Compliance

Middle Tennessee State University

maintains confidentiality and anonymity of the research subjects. **The IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board  
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: <http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>
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 Murfreesboro, TN 37129

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 STATE UNIVERSITY

**IRBN007 – EXEMPTION DETERMINATION NOTICE**

Wednesday, October 14, 2020

Protocol Title ***A comparison of perceptions and experiences of undergraduate students, graduate students, and faculty in University Psychology Programs***

Protocol ID **20-1206**

Principal Investigator **Sean Ganus\* (Student)**  
 Faculty Advisor **James Loveless\***  
 Co-Investigators **Bethany Contreras\*\***  
 Investigator Email(s) **sdg3s@mtmail.mtsu.edu; james.loveless; and bethany.contreras@unr.edu**

Department/Affiliation **Psychology\* and University of Nevada, Reno\*\***

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXEMPT** review mechanism under 45 CFR 46.101(b)(2) within the research category (2) *Educational Tests*. A summary of the IRB action and other particulars in regard to this protocol application is tabulated as shown below:

IRB Action	<b>EXEMPT from further IRB review***</b>	Date	<b>7/20/20</b>
Date of Expiration	<b>7/31/2021</b>		
Sample Size	<b>100 (ONE HUNDRED)</b>		
Participant Pool	<b>Healthy adults (18 or older) - University students and faculty</b>		
Exceptions	Online consent followed by internet-based survey using Qualtrics is permitted (Qualtrics links on file).		
Mandatory Restrictions	<ol style="list-style-type: none"> <li>1. Participants must be 18 years or older</li> <li>2. Informed consent must be obtained from the participants</li> <li>3. Identifying information must not be collected</li> </ol>		
Restrictions	<ol style="list-style-type: none"> <li>1. All restrictions for exemption apply.</li> <li>2. Mandatory active informed consent with age-verification.</li> <li>3. NOT approved for in-person data collection.</li> </ol>		
Approved IRB Templates	IRB Templates: Online informed consent script, recruitment emails & SONA recruitment script Non-IRB template: NONE		
Funding	NONE		
Comments	Refer to the Post-Approval section for important COVID-19 instructions		

\*\*\*Although this exemption determination allows above defined protocol from further IRB review, such as continuing review, MTSU IRB will continue to give regulatory oversight to ensure compliance.

**Summary of Post-approval Requirements:**

The investigator(s) indicated in this notification should read and abide by all applicable post-approval conditions (refer "Quick Links" below for more information):

- PI must close-out this protocol by submitting a final report before 7/31/2021; if more time is needed to complete the data collection, the PI must request an extension. **NO REMINDRES WILL BE SENT. Failure to close-out (or request extension) may result in penalties** including cancellation of the data collected using this protocol or withholding student diploma.
- IRB approval must be obtained for all types of amendments, such as:
  - Addition/removal of subject population and sample size
  - Change in investigators
  - Changes to the research sites – appropriate permission letter(s) from may be needed if the study will be conducted at a non-MTSU location
  - Alteration to funding
- Modifications to procedures must be clearly described in an addendum request form and the proposed changes must not be incorporated without an approval
- The proposed change must be consistent with the approved protocol and comply with exemption requirements
- Research-related injuries to the participants and other events, such as, deviations & misconduct, must be reported within 48 hours of such events to [compliance@mtsu.edu](mailto:compliance@mtsu.edu)

**Post-approval Protocol Amendments:**

The current MTSU IRB policies allow the investigators to implement minor and significant amendments that would not result in the cancellation of the protocol's eligibility for exemption. **Only THREE procedural amendment requests will be entertained per year. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel.**

Date	Amendment(s)	IRB Comments
08/13/2020	Minor errors/omissions were corrected in the surveyinstruments.	IRBA2021-170
09/25/2020	Myra Pennington (map6s: CITI6437341) is added to the protocol.	IRBA2021-191

**Post-approval IRB Actions:**

Date	IRB Action(s)	IRB Comments
07/20/2020	The Faculty Advisor (FA) is given the administrative authority to make the necessary amendments to protect the health and welfare of participants and student researchers during the COVID-19 National Emergency. The FA must, however, notify the IRB (via simple emails or through standard amendment documentation) after such changes were made. The IRB will audit the amendments at a later date and will suggest remedial measures if needed..	COVID-19

**Mandatory Data Storage Requirement:**

All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Additionally, the Tennessee State data retention requirement may apply (refer "Quick Links" below for policy 129). Subsequently, the data may be destroyed in a manner that

maintains confidentiality and anonymity of the research subjects. **The IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this notice.** Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board  
Middle Tennessee State University

Quick Links:

- Post-approval Responsibilities: <http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php>
- Exemption Procedures: <https://mtsu.edu/irb/ExemptPaperWork.php>
- MTSU Policy 129: Records retention & Disposal: <https://www.mtsu.edu/policies/general/129.php>

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**IRBF024 - INFORMED CONSENT for ONLINE STUDIES**

(Use this consent template when recruiting adult participants when online data are collected)

**SONA**

Mandatory Consent Requirements for online use:

- a. Use the same text used in this form when requesting online consent from the participants – Provide the online consent link for IRB review
- b. The first page of the survey must display this informed consent text.
- c. Participants' consent to participate must be entertained by two distinct responses: one to consent and one to decline.
  - i. The participant age must be verified through a separate question
  - ii. Agreeing to consent and age verification must both be true before the online instrument can be administered.
  - iii. Additional questions may be asked for filtering ineligible participants

**Use the entire script as is for online consent**

**Primary Investigator:** Sean Ganus, Candidate M.A. Clinical Psychology  
**PI Department & College:** Psychology Department, Middle Tennessee State University  
**Faculty Advisor (if PI is a student):** Dr. James Loveless  
**Protocol Title:** A Comparison of the Experiential Perceptions of Undergraduate and Graduate Psychology Students with the Perceptions of Psychology Faculty and Instructors  
**Protocol ID:** 20-1206      **Approval Date:** 07/16/2020      **Expiration Date:** 07/31/2021

**Information and Disclosure Section**

1. **Purpose:** This research project is designed to help us evaluate the experiences and perceptions of psychology students as it relates to ethnic/racial and gender identity. Student satisfaction is related to several factors, including program completion and experiences relating to ethnic-racial and gender identity. An additional factor that may be related to student satisfaction is relationships with faculty within their programs. This research project is designed to help us evaluate the experiences and perceptions of psychology students as it relates to ethnic/racial and gender identity. Additionally, the researcher hopes to compare overall psychology student experiences and perceptions to the perceptions of psychology faculty and instructors.
2. **Description:** There are several parts to this project. They are:

- o Section 1 asks for demographic data including number of years in college, undergraduate or graduate student status, ethnic/racial self-identity, gender self-identity, and student goals following program completion
  - o Section 2 asks about student perceptions and experiences as they relate to ethnic/racial and gender self-identity.
3. **Duration:** The whole activity should take about 30 minutes. The participants will be compensated as described below. The participants must at least take 15 minutes.
4. **Here are your rights as a participant:**
- Your participation in this research is voluntary.
  - You may skip any item that you don't want to answer, and you may stop the experiment at any time (but see the note below)
  - If you leave an item blank by either not clicking or entering a response, you may be warned that you missed one, just in case it was an accident. But you can continue the study without entering a response if you didn't want to answer any questions.
  - Some items may require a response to accurately present the survey.
5. **Risks & Discomforts:** The questions in this study have been designed to pose no more than minimal risk to participants, and do not inquire about subjects that researchers believe participants may find sensitive. The questions in these surveys focus on participant perceptions as it relates to student ethnic/racial identity and gender, but do not inquire about material that researchers believe could reasonably pose a risk of substantial discomfort.
6. **Benefits:** Participants will not benefit directly from participation in this study. However, participants may be interested in potentially aiding in adding to the general knowledge about student experiential perceptions within psychology programs, and how they impact student relatedness to faculty.
7. **Identifiable Information:** You will NOT be asked to provide identifiable personal information.
8. **Compensation: The participants will be compensated by one or more of the following as described below.**
- Compensation Requirements:*
- a) *The qualifications to participate in this research are: being an undergraduate or graduate student of psychology age 18 years or over, and being recruited through the SONA system for Middle Tennessee State University's research participation pool for the Psychology Department. If you do not meet these qualifications, you will not be included in the research and you will not be compensated.*
  - b) *After you complete this consent form you will answer screening questions. If you fail to qualify for the research based on these questions, the research will end and you will not be compensated.*
  - c) *Please do not participate in this research more than once. Multiple attempts to participate will not be compensated.*
9. **Confidentiality.** All efforts, within reason, will be made to keep the personal information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.

**10. Contact information.** If you should have any questions about this research study or possibly injury, please feel free to contact Sean Ganus by telephone at 478-957-9595 or by email at [sdg3s@mtmail.mtsu.edu](mailto:sdg3s@mtmail.mtsu.edu) OR my faculty advisor, Dr. James Loveless, at his email address, [James.Loveless@mtsu.edu](mailto:James.Loveless@mtsu.edu), or his office telephone number, 615-898-5288. You can also contact the MTSU Office of compliance via telephone (615 494 8918) or by email ([compliance@mtsu.edu](mailto:compliance@mtsu.edu)). This contact information will be presented again at the end of the experiment.

#### Participant Response Section

- No  Yes I have read this informed consent document pertaining to the above identified research  
 No  Yes The research procedures to be conducted are clear to me  
 No  Yes I confirm I am 18 years or older  
 No  Yes I am aware of the potential risks of the study

By clicking below, I affirm that I freely and voluntarily choose to participate in this study. I understand I can withdraw from this study at any time without facing any consequences.

- NO I do not consent  
 Yes I consent

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
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**IRBF024 - INFORMED CONSENT for ONLINE STUDIES**

(Use this consent template when recruiting adult participants when online data are collected)

**NON-MTSU STUDENT POOL**

Mandatory Consent Requirements for online use:

- a. Use the same text used in this form when requesting online consent from the participants – Provide the online consent link for IRB review
- b. The first page of the survey must display this informed consent text.
- c. Participants' consent to participate must be entertained by two distinct responses: one to consent and one to decline.
  - i. The participant age must be verified through a separate question
  - ii. Agreeing to consent and age verification must both be true before the online instrument can be administered.
  - iii. Additional questions may be asked for filtering ineligible participants

**Use the entire script as is for online consent**

**Primary Investigator:** Sean Ganus, Candidate M.A. Clinical Psychology  
**PI Department & College:** Psychology Department, Middle Tennessee State University  
**Faculty Advisor (if PI is a student):** Dr. James Loveless  
**Protocol Title:** A Comparison of the Experiential Perceptions of Undergraduate and Graduate Psychology Students with the Perceptions of Psychology Faculty and Instructors  
**Protocol ID:** 20-1206      **Approval Date:** 07/16/2020      **Expiration Date:** 07/31/2021

**Information and Disclosure Section**

1. **Purpose:** This research project is designed to help us evaluate the experiences and perceptions of psychology students as it relates to ethnic/racial and gender identity. Student satisfaction is related to several factors, including program completion and experiences relating to ethnic-racial and gender identity. An additional factor that may be related to student satisfaction is relationships with faculty within their programs. This research project is designed to help us evaluate the experiences and perceptions of psychology students as it relates to ethnic/racial and gender identity. Additionally, the researcher hopes to compare overall psychology student experiences and perceptions to the perceptions of psychology faculty and instructors.
2. **Description:** There are several parts to this project. They are:

- Section 1 asks for demographic data including number of years in college, undergraduate or graduate student status, ethnic/racial self-identity, gender self-identity, and student goals following program completion
- o Section 2 asks about student perceptions and experiences as they relate to ethnic/racial and gender self-identity.
3. **Duration:** The whole activity should take about 30 minutes. The participants will be compensated as described below. The participants must at least take 15 minutes.
  4. **Here are your rights as a participant:**
    - Your participation in this research is voluntary.
    - You may skip any item that you don't want to answer, and you may stop the experiment at any time (but see the note below)
    - If you leave an item blank by either not clicking or entering a response, you may be warned that you missed one, just in case it was an accident. But you can continue the study without entering a response if you didn't want to answer any questions.
    - Some items may require a response to accurately present the survey.
  5. **Risks & Discomforts:** The questions in this study have been designed to pose no more than minimal risk to participants, and do not inquire about subjects that researchers believe participants may find sensitive. The questions in these surveys focus on participant perceptions as it relates to student ethnic/racial identity and gender, but do not inquire about material that researchers believe could reasonably pose a risk of substantial discomfort.
  6. **Benefits:** Participants will not benefit directly from participation in this study. However, participants may be interested in potentially aiding in adding to the general knowledge about student experiential perceptions within psychology programs, and how they impact student relatedness to faculty.
  7. **Identifiable Information:** You will NOT be asked to provide identifiable personal information.
  8. **Compensation: There is no compensation for participating in this study.**
  9. **Confidentiality.** All efforts, within reason, will be made to keep the personal information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.
  10. **Contact Information.** If you should have any questions about this research study or possibly injury, please feel free to contact Sean Ganus by telephone at 478-957-9595 or by email at [sdg3s@mtmail.mtsu.edu](mailto:sdg3s@mtmail.mtsu.edu) OR my faculty advisor, Dr. James Loveless, at his email address, [James.Loveless@mtsu.edu](mailto:James.Loveless@mtsu.edu), or his office telephone number, 615-898-5288. You can also contact the MTSU Office of compliance via telephone (615 494 8918) or by email ([compliance@mtsu.edu](mailto:compliance@mtsu.edu)). This contact information will be presented again at the end of the experiment.

### Participant Response Section

Institutional Review Board

Office of Compliance

Middle Tennessee State University

- No  Yes I have read this informed consent document pertaining to the above identified research  
 No  Yes The research procedures to be conducted are clear to me  
 No  Yes I confirm I am 18 years or older  
 No  Yes I am aware of the potential risks of the study

By clicking below, I affirm that I freely and voluntarily choose to participate in this study. I understand I can withdraw from this study at any time without facing any consequences.

- NO I do not consent  
 Yes I consent

APPROVED

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129

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**IRBF024 - INFORMED CONSENT for ONLINE STUDIES**

(Use this consent template when recruiting adult participants when online data are collected)

**FACULTY**

**Mandatory Consent Requirements for online use:**

- a. Use the same text used in this form when requesting online consent from the participants – Provide the online consent link for IRB review
- b. The first page of the survey must display this informed consent text.
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  - i. The participant age must be verified through a separate question
  - ii. Agreeing to consent and age verification must both be true before the online instrument can be administered
  - iii. Additional questions may be asked for filtering ineligible participants

**Use the entire script as is for online consent**

**Primary Investigator:** Sean Ganus, Candidate M.A. Clinical Psychology

**PI Department & College:** Psychology Department, Middle Tennessee State University

**Faculty Advisor (if PI is a student):** Dr. James Loveless

**Protocol Title:** A Comparison of the Experiential Perceptions of Undergraduate and Graduate Psychology Students with the Perceptions of Psychology Faculty and Instructors

**Protocol ID:** 20-1206

**Approval Date:** 07/16/2020

**Expiration Date:** 07/31/2021

**Information and Disclosure Section**

1. **Purpose:** This research project is designed to help us evaluate the experiences and perceptions of psychology students as it relates to ethnic/racial and gender identity. Student satisfaction is related to several factors, including program completion and experiences relating to ethnic-racial and gender identity. An additional factor that may be related to student satisfaction is relationships with faculty within their programs. This research project is designed to help us evaluate the experiences and perceptions of psychology students as it relates to ethnic/racial and gender identity. Additionally, the researcher hopes to compare overall psychology student experiences and perceptions to the perceptions of psychology faculty and instructors.

IRBF024

Version 1.1

10.04.2018

2. **Description:** There are several parts to this project. They are:
  - o Section 1: asks for demographic data including number of years teaching at the college or university level, status (undergraduate or graduate) of students taught within their program, ethnic/racial identity, gender identity, and training goals of their program
  - o Section 2: asks about faculty perceptions of student experiences and perceptions as it relates to student ethnic/racial and gender identity
3. **Duration:** The whole activity should take about 30 minutes. There is no compensation for participation. The participants must at least take 15 minutes.
4. **Here are your rights as a participant:**
  - Your participation in this research is voluntary.
  - You may skip any item that you don't want to answer, and you may stop the experiment at any time (but see the note below)
  - If you leave an item blank by either not clicking or entering a response, you may be warned that you missed one, just in case it was an accident. But you can continue the study without entering a response if you didn't want to answer any questions.
  - Some items may require a response to accurately present the survey.
5. **Risks & Discomforts:** The questions in this study have been designed to pose no more than minimal risk to participants, and do not inquire about subjects that researchers believe participants may find sensitive. The questions in these surveys focus on participant perceptions as it relates to student ethnic/racial identity and gender, but do not inquire about material that researchers believe could reasonably pose a risk of substantial discomfort.
6. **Benefits:** Participants will not directly benefit from their participation in this survey. However, participants may be interested in potentially aiding in adding to the general knowledge about student experiential perceptions within psychology programs, and how they impact student relatedness to faculty.
7. **Identifiable Information:** You will NOT be asked to provide identifiable personal information.
8. **Compensation:** There is no compensation for participating in this study.
9. **Confidentiality.** All efforts, within reason, will be made to keep the personal information private but total privacy cannot be promised. Your information may be shared with MTSU or the government, such as the Middle Tennessee State University Institutional Review Board, Federal Government Office for Human Research Protections, if you or someone else is in danger or if we are required to do so by law.
10. **Contact Information.** If you should have any questions about this research study or possibly injury, please feel free to contact Sean Ganus by telephone (478-957-9595) or by email [sdg3s@mtmail.mtsu.edu](mailto:sdg3s@mtmail.mtsu.edu) OR my faculty advisor, Dr. James Loveless, at [James.Loveless@mtsu.edu](mailto:James.Loveless@mtsu.edu) or 615-898-5288. You can also contact the MTSU Office of compliance via telephone (615 494 8918) or by email ([compliance@mtsu.edu](mailto:compliance@mtsu.edu)). This contact information will be presented again at the end of the experiment.

#### **Participant Response Section**

Institutional Review Board

Office of Compliance

Middle Tennessee State University

- No  Yes I have read this informed consent document pertaining to the above identified research  
 No  Yes The research procedures to be conducted are clear to me  
 No  Yes I confirm I am 18 years or older  
 No  Yes I am aware of the potential risks of the study

By clicking below, I affirm that I freely and voluntarily choose to participate in this study. I understand I can withdraw from this study at any time without facing any consequences.

- NO I do not consent  
 Yes I consent

APPROVED BY THE IRB

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129

**MIDDLE**  
**TENNESSEE**  
 STATE UNIVERSITY

### IRBF007b – PARTICIPANT RECRUITMENT EMAIL

#### SONA

Use the following text for recruitment, including the protocol details

**Subject line(s) for email recruitment:** Must clearly state that the invitation is for a research study. **MUST NOT** contain compensation or other inducement details in the subject line

RE: Invitation to Participate in Thesis Research - Student Experiences and Perceptions of Academic Environments

Body of the script/email:

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(The following protocol information can either presented in the top as it is shown here, or it can be inserted in the text below as long as the information is clear to the reader that this email is about a research study)

**Primary Investigator:** Sean Ganus

**PI Department & College:** Psychology Department, College of Graduate Studies, **Middle Tennessee State University**

**Faculty Advisor (if PI is a student):** Dr. James Loveless

**Protocol Title:** A Comparison of the Experiential Perceptions of Undergraduate and Graduate Psychology Students with the Perceptions of Psychology Faculty and Instructors

**Protocol ID:** 20-1206      **Approval Date:** 07/16/2020 **Expiration Date:** 07/31/2021

Dear Participant,

Thank you for taking the time to consider participating in this survey! In 1997, the American Psychological Association put out a call to action to increase the diversity in American psychology to more closely represent the demographic diversity of the American population. Failing to maintain appropriate representation risks excluding unrepresented individuals from the benefits of psychological knowledge and practice. As the events behind recent protests are illustrating, significant harm results from excluding and marginalizing others. In order to increase the diversity in the field of psychology, the diversity of students studying psychology must also be increased, specifically the diversity of psychology students who graduate from their programs. Student satisfaction as it relates to ethnic/racial and gender identity has been associated with the likelihood that students will complete their programs of study, at both the undergraduate and graduate level. Additionally, college and university student relatedness to faculty has been associated with student satisfaction. With this study, we hope to increase knowledge of student satisfaction as it relates to ethnic/racial and gender identity, as well as increase the knowledge of student relatedness to faculty and instructors. Specifically, we are interested in increasing knowledge of these two subjects within college and university psychology departments and programs.

**Study Description & Purpose** – This study will consist of two surveys - one survey to be administered online to both undergraduate and graduate psychology students, and the other survey to be administered to both faculty and instructors in college and university psychology departments and programs. The student survey, which you will be taking, will contain two sections. The first section will ask for demographic information, including your ethnic/racial self-identity, your gender self-identity, the number of years you have been in college, undergraduate or graduate student status, and your post-graduation plans. The second section will include questions asking for information relating to your interactions with faculty and instructors, your satisfaction with those interactions, and how that satisfaction and interaction relates to your ethnic/racial self-identity and your gender self-identity. You will also be asked questions about your perception of ethnic/racial and gender representation within the field of psychology and within your immediate academic environment.

**Target Participant Pool** – Undergraduate psychology students (age 18 or over), graduate psychology students (age 18 or over), college or university psychology department faculty or instructors, and college or university psychology program faculty or instructors.

**Risks & Discomforts** –The student researcher and their faculty advisors have designed the questions in these surveys so that they are expected to pose no more than minimal harm. Participants will not be asked for information relating to subjects the student researcher and their faculty advisors believe would be of a sensitive nature. Questions will focus on subjects relating to perceived diversity within psychology departments, psychology programs, and overall academic environments.

**Benefits** – There is no direct benefit to participants. However, participation may help in adding knowledge to the field as it relates to psychology student satisfaction and relatedness to psychology instructors along ethnic/racial and gender identity lines.

**Additional Information** – Additional information about this survey can be found at [studentexperientialperceptions.wordpress.com](http://studentexperientialperceptions.wordpress.com).

**Compensation** – As a participant recruited from Middle Tennessee State University's research participant pool through the university's SONA server, you will be compensated with 1 research participation credit for the estimated 30 minute completion time for the survey.

**Contact Information** –  
 Primary Researcher: Sean Ganus  
 Phone: 478-957-9595  
 Email: [sdg3s@mtmail.mtsu.edu](mailto:sdg3s@mtmail.mtsu.edu).

Faculty Advisor: Dr. James Loveless  
 Office Phone: 615-898-5288  
 Email: [James.Loveless@mtsu.edu](mailto:James.Loveless@mtsu.edu).

Please enter the survey by clicking the link in the bottom of the email. You will be given a chance to read the entire informed consent to assist you make a final determination (if using a Qualtrics Survey).

Thank you for your participation in this study. With the current civil rights protests occurring nationwide, it is important to consider the American Psychological Association's commitment to increasing diverse representation along all identities within the field of psychology, and to increase knowledge relating to diversity and the benefits of that knowledge not just within the field of psychology, but to society as a whole. Behavioral science can and does play a key role in understanding how we relate to one another and subsequently influencing our interactive behavior. It is important to learn as much as we can about human perceptions and experiences from a diverse perspective.

Yours Sincerely,

Sean Ganus  
 Candidate, M.A. Clinical Psychology

**Qualtrics link for Survey** – [Add Link below](#)

**IRB**  
**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129

**MIDDLE  
 TENNESSEE**  
 STATE UNIVERSITY

**IRBF007b – PARTICIPANT RECRUITMENT EMAIL**

**STUDENT**

Use the text below for recruitment, including the protocol details

**Subject line(s) for email recruitment:** Must clearly state that the invitation is for a research study. **MUST NOT** contain compensation or other inducement details in the subject line

RE: Invitation to Participate in Thesis Research - Student Experiences and Perceptions of Academic Environments

Body of the script/email:

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(The following protocol information can either presented in the top as it is shown here, or it can be inserted in the text below as long as the information is clear to the reader that this email is about a research study)

**Primary Investigator:** Sean Ganus

**PI Department & College:** Psychology Department, College of Graduate Studies, **Middle Tennessee State University**

**Faculty Advisor (if PI is a student):** Dr. James Loveless

**Protocol Title:** A Comparison of the Experiential Perceptions of Undergraduate and Graduate Psychology Students with the Perceptions of Psychology Faculty and Instructors

**Protocol ID:** 20-1206      **Approval Date:** 07/16/2020 **Expiration Date:** 07/2/101'

Dear Participant,

Thank you for taking the time to consider participating in this survey! In 1997, the American Psychological Association put out a call to action to increase the diversity in American psychology to more closely represent the demographic diversity of the American population. Failing to maintain appropriate representation risks excluding unrepresented individuals from the benefits of psychological knowledge and practice. As the events behind recent protests are illustrating, significant harm results from excluding and marginalizing others. In order to increase the diversity in the field of psychology, the diversity of students studying psychology must also be increased, specifically the diversity of psychology students who graduate from their programs. Student satisfaction as it relates to ethnic/racial and gender identity has been associated with the likelihood that students will complete their programs of study, at both the undergraduate and graduate level. Additionally, college and university student relatedness to faculty has been associated with student satisfaction. With this study, we hope to increase knowledge of student satisfaction as it relates to ethnic/racial and gender identity, as well as increase the knowledge of student relatedness to faculty and instructors. Specifically, we are interested in increasing knowledge of these two subjects within college and university psychology departments and programs.

**Study Description & Purpose** – This study will consist of two surveys - one survey to be administered online to both undergraduate and graduate psychology students, and the other survey to be administered to both faculty and instructors in college and university psychology departments and programs. The student survey, which you will be taking, will contain two sections. The first section will ask for demographic information, including your ethnic/racial self-identity, your gender self-identity, the number of years you have been in college, undergraduate or graduate student status, and your post-graduation plans. The second section will include questions asking for information relating to your interactions with faculty and instructors, your satisfaction with those interactions, and how that satisfaction and interaction relates to your ethnic/racial self-identity and your gender self-identity. You will also be asked questions about your perception of ethnic/racial and gender representation within the field of psychology and within your immediate academic environment.

**Target Participant Pool** – Undergraduate psychology students (age 18 or over), graduate psychology students (age 18 or over), college or university psychology department faculty or instructors, and college or university psychology program faculty or instructors.

**Risks & Discomforts** – The student researcher and their faculty advisors have designed the questions in these surveys so that they are expected to pose no more than minimal harm. Participants will not be asked for information relating to subjects the student researcher and their faculty advisors believe would be of a sensitive nature. Questions will focus on subjects relating to perceived diversity within psychology departments, psychology programs, and overall academic environments.

**Benefits** – There is no direct benefit to participants. However, participation may help in adding knowledge to the field as it relates to psychology student satisfaction and relatedness to psychology instructors along ethnic/racial and gender identity lines.

**Additional Information** – Additional information about this survey can be found at [studentexperientialperceptions.wordpress.com](http://studentexperientialperceptions.wordpress.com).

**Compensation** – You will not be directly or indirectly compensated for your participation.

**Contact Information** –

Primary Researcher: Sean Ganus  
Phone: 478-957-9595  
Email: [sdg3s@mtmail.mtsu.edu](mailto:sdg3s@mtmail.mtsu.edu).

Faculty Advisor: Dr. James Loveless  
Office Phone: 615-898-5288  
Email: [James.Loveless@mtsu.edu](mailto:James.Loveless@mtsu.edu).

Please enter the survey by clicking the link in the bottom of the email. You will be given a chance to read the entire informed consent to assist you make a final determination (if using a Qualtrics Survey).

**Concluding paragraph(s) (optional):** Thank you for your participation in this study. With the current civil rights protests occurring nationwide, it is important to consider the American Psychological Association's commitment to increasing diverse representation along all identities within the field of psychology, and to increase knowledge relating to diversity and the benefits of that knowledge not just within the field of psychology, but to society as a whole. Behavioral science can and does play a key role in understanding how we relate to one another and subsequently influencing our interactive behavior. It is important to learn as much as we can about human perceptions and experiences from a diverse perspective.

Yours Sincerely,

Sean Ganus  
Candidate, M.A. Clinical Psychology

Qualtrics link for Survey – [Add Link below](#)

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**INSTITUTIONAL REVIEW BOARD**  
 Office of Research Compliance,  
 010A Sam Ingram Building,  
 2269 Middle Tennessee Blvd  
 Murfreesboro, TN 37129



## IRBF007b – PARTICIPANT RECRUITMENT EMAIL

### FACULTY

Use the following script, including the protocol details, for email recruitment purposes

**Subject line(s) for email recruitment:** Must clearly state that the invitation is for a research study. **MUST NOT** contain compensation or other inducement details in the subject line

**RE:** Invitation to Participate in Thesis Research - Student Experiences and Perceptions of Academic Environments

**Body of the script/email:**

(The following protocol information can either presented in the top as it is shown here, or it can be inserted in the text below as long as the information is clear to the reader that this email is about a research study)

**Primary Investigator:** Sean Ganus

**PI Department & College:** Psychology Department, College of Graduate Studies, **Middle Tennessee State University**

**Faculty Advisor (if PI is a student):** Dr. James Loveless

**Protocol Title:** A Comparison of the Experiential Perceptions of Undergraduate and Graduate Psychology Students with the Perceptions of Psychology Faculty and Instructors

**Protocol ID:** 20-1206      **Approval Date:** 07/16/2020 **Expiration Date:** 07/31/2021

Dear Participant,

Thank you for taking the time to consider participating in this survey! In 1997, the American Psychological Association put out a call to action to increase the diversity in American psychology to more closely represent the demographic diversity of the American population. Failing to maintain appropriate representation risks excluding unrepresented individuals from the benefits of psychological knowledge and practice. As the events behind recent protests are illustrating, significant harm results from excluding and marginalizing others. In order to increase the diversity in the field of psychology, the diversity of students studying psychology must also be increased, specifically the diversity of psychology students who graduate from their programs. Student satisfaction as it relates to ethnic/racial and gender identity has been associated with the likelihood that students will complete their programs of study, at both the undergraduate and graduate level. Additionally, college and university student relatedness to faculty has been associated with student satisfaction. With this study, we hope to increase knowledge of student satisfaction as it relates to ethnic/racial and gender identity, as well as increase the knowledge of student relatedness to faculty and instructors. Specifically, we are interested in increasing knowledge of these two subjects within college and university psychology departments and programs.

**Study Description & Purpose** – This study will consist of two surveys, one designed for undergraduate and graduate students of psychology, and the other designed for psychology program or psychology department faculty and instructors. The faculty and instructor survey, which you will be taking, will include questions about ethnic/racial and gender identity, the number of years you have taught psychology at the college or university level, the undergraduate or graduate status of students you work with, courses of study you offer classes in, and the nature of the program you teach in with regard to student preparation for life after graduation. The second section of the survey will include questions asking for information relating to your perceptions of student satisfaction within their programs of study as such satisfaction relates to ethnic/racial and gender identity, your degree of perceived interaction with psychology students as such interaction relates to ethnic/racial and gender demographics, and your perceptions of ethnic/racial and gender representation within psychology.

**Target Participant Pool** – Undergraduate psychology students (age 18 or over), graduate psychology students (age 18 or over), college or university psychology department faculty or instructors, and college or university psychology program faculty or instructors.

**Risks & Discomforts** –The student researcher and their faculty advisors have designed the questions in these surveys so that they are expected to pose no more than minimal harm. You will not be asked for information relating to subjects that the student researcher and their faculty advisors believe would be of a sensitive nature. Questions will focus on subjects relating to perceived diversity within psychology departments, psychology programs, and overall academic environments.

**Benefits** – There is no direct benefit to participants. However, participation may help in adding knowledge to the field as it relates to psychology student satisfaction and relatedness to psychology instructors along ethnic/racial and gender identity lines.

**Additional Information** – Additional information relating to this survey can be found at [facultyexperientialperceptions.wordpress.com](http://facultyexperientialperceptions.wordpress.com).

**Compensation** – You will not be directly or indirectly compensated for your participation.

**Contact Information** –  
 Primary Researcher: Sean Ganus  
 Phone: 478-957-9595  
 Email: [sdg3s@mtmail.mtsu.edu](mailto:sdg3s@mtmail.mtsu.edu).

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 Email: [James.Loveless@mtsu.edu](mailto:James.Loveless@mtsu.edu).

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Yours Sincerely,

Yours Sincerely,

Sean Ganus  
 Candidate, M.A. Clinical Psychology

Qualtrics link for Survey – [Add Link below](#)