The impact of campus environment perceptions and sense of belonging on the persistence decisions of students at a rural community college

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Community college students are often excluded from persistence studies due to the unique characteristics of community colleges and its students. Recent studies have heavily relied on retention models that do not adequately account for the role individual and campus culture plays in students’ persistence decisions. Using Museus’ (2014) Culturally Engaging Campus Environment (CECE) model, this cross-sectional, correlational study examined the impact of campus environment perceptions and sense of belonging on the persistence decisions of students at a rural community college in the southeastern part of the U.S.

Correlation analyses were conducted to investigate the relationships between two independent variables, campus environment perceptions and sense of belonging, and one dependent variable, students’ persistence decisions. An analysis of variance (ANOVA) was used to determine if differences in campus environment perceptions and sense of belonging existed between racial and gender identity groups. Lastly, a t-test was conducted to examine differences between residential and commuter students.

Utilizing the CECE Survey for Community Colleges (Museus et al., 2017), a total of 234 responses were analyzed. The results revealed that students are more likely to persist when they
have a positive perception of the campus environment. It also revealed that students were more likely to persist when they possessed a strong sense of belonging. Upon examining differences of campus environment perceptions, the results showed that gender identity influenced campus environment perceptions and race influenced sense of belonging among students. There was insufficient evidence to establish differences of campus environment perceptions and sense of belonging among residential and commuter students. Limitations regarding this study included its generalizability due to the low number of survey responses and the physical aspect of campus environment and campus culture. Recommendations for policymakers and practitioners include consideration for community memberships, increase campus support for underrepresented groups, and cultural competency for training. Recommendations for future research include the use of different theoretical frameworks to understand student persistence, continued studies involving community colleges, inclusive campus environment perceptions and sense of belonging studies, and qualitative studies on campus environment perceptions and sense of belong of community college students.

Key words: community college students, persistence, sense of belonging, culturally engaging campus environment, campus environment perceptions
DEDICATION

This body of work would not have been possible without God and an amazing support system. Because of you, I can. This work is dedicated to the following individuals. To my wonderful, late grandparents, Charlie and Beneva Henry and Lorine and L.V. Duren, although you are no longer here, thank you for establishing and instilling the principles of hard work and education before I was born. To my mom, Catherine Henry, thank you for raising me to believe I could achieve anything, for encouraging me and being my biggest cheerleader. To my dad, Tracy Henry, Sr., thank you for being a listening ear and an encourager. Having you on this journey with me has meant so much. To my brother, Tracy Henry, Jr. (T.J.), thank you for giving me so much laughter, listening and for constantly reminding me that “I got this.” You’re the best big brother a girl could ask for. To my little sister, J’Naiya Thomas, I hope I inspire you to ignore the naysayers and go for your goals. This work is also dedicated to a very special church member, Alberta Lyons, who is no longer with me on earth, but whose voice I still hear when I wanted to take breaks. I can still hear you say, “Go get your lesson!” I appreciate and miss you so much.
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CHAPTER I

INTRODUCTION

Community colleges are postsecondary institutions that have solidified their role in the sector of higher education through serving more than half of all undergraduates in the United States (Windham, Rechfuss, Williams, & Tincher-Ladner, 2014). Through their open enrollment missions, community colleges have been able to positively impact the labor markets of their local communities and provide access to traditionally underserved populations. These positive outcomes have not been without challenges. The Community College Research Center (2017) reports that only approximately 28% of first-time, high school graduates earn any degree or certificate within 8.5 years at community colleges.

Until approximately three decades ago, discussions regarding persistence focused on the students who attended 4-year institutions and intentionally left community college students out of the discussion because of the unique pre-college characteristics and current circumstances that most community college students faced (Rigah-Oiler & Kurpius, 2015; Wolniak, Matthew, & Engberg, 2012). Community college students statistically work more hours off-campus, have more familial obligations, and are more academically underprepared than the traditional 4-year student (Cohen, Brawer, & Kisker, 2014; Crisp, Taffart, & Nora, 2015; Johnson, Wasserman, Yildrim, & Yonai, 2014). Retention studies that did include community college students often examined how precollege characteristics (e.g., ACT/SAT scores, motivation and academic preparedness) predicted whether a student would persist beyond their first year of college.
2

(Denson & Chang, 2015; Fike & Fike, 2009; Majer, 2009; Nakajima, Dembo, & Mossler, 2012). These studies placed a significant amount of the student’s success on the student and did not give much account to how the campus environment played a role in whether a student decided to persist. Campus environment studies have existed but often mainly included perspectives of racial/ethnic minorities (Griffin, Cunningham & Mwangi, 2015; Jones, 2013; Nelson-Laird & Niskade, 2010; Wei, Ku & Liao, 2011). Additionally, studies heavily relied on Tinto’s theory of student integration (Barbatis, 2010; Deil-Amen, 2011; Johnson et al., 2014).

Tinto’s theory of student integration has been criticized for its lack of consideration given to the important role that cultural connections play in some students’ lives, especially racial/ethnic minorities’ lives (Deil-Amen, 2011). Tinto’s theoretical model posits that a student is more likely to persist if the student achieves social congruence with his or her intellectual community (Deil-Amen, 2011). Social congruence is achieved by the student integrating academically and socially within the campus culture (Deil-Amen, 2011). Tinto’s contribution to understanding student integration and persistence is beyond commendable; however, even his more current work calls for an additional lens in understanding student persistence. The notion of leaving one’s culture for the institution’s culture has not always proven as successful among students of color (Cuellar & Johnson-Ahorlu, 2016; Griffin et al., 2015; Museus, Nichols, & Lambert, 2008) or students at community colleges (Cuellar & Johnson-Ahorlu, 2016; Majer, 2009; Martin, Galentino & Townsend, 2014).

Without further research about what contributes to student success at community colleges, administrators and faculty are left to anecdotal approaches. The consideration of student experiences and student characteristics have been helpful in understanding factors of
student departure, but it does not provide enough insight on the entire situation. Research must include a discussion about how students perceive their campus environment and how these perceptions impact the students’ decisions to persist at that particular institution. This also includes exploring whether these perceptions impact their sense of belonging and decisions to persist as well. It is believed that if a student does not feel welcomed in a space, these feelings will also hinder the student’s ability to seek out assistance when needed (Museus, Yi, & Saelua, 2017). These experiences can cause a student to withdraw from courses or leave the institution altogether.

The goal for the proposed research is to assist expand the literature as it relates to understanding student persistence decisions at community colleges. Discussions and observations regarding student retention and success have been thoroughly discussed within the large, public 4-year institution sector (Rigali-Oiler & Kurpius, 2013; Tinto, 1993; Wei et al., 2011; Wolniak et al., 2012). The stark differences within the community college student population creates points of contention regarding the development of community college students (Barbatis, 2010; Fike & Fike, 2008; Nakajima et al., 2012; Wyner, 2014). Community colleges’ open enrollment system contributes to a very diverse student population (Ellis-O’Quinn, 2012). Most students are members of underrepresented groups which have historically been groups that produce the most at-risk students (Barbatis, 2010). Additionally, community college students may possess an identity in which they hold membership within several underrepresented groups at once, for example, being a female, ethnic minority and first-generation college student. In this regard, traditional studies are even less applicable due to
historical populations of the time including middle class, white, traditional-age males (Barbatis, 2010).

While it is important to understand the role student demographics play in the student experience, it is of equal importance to examine whether the culture and campus environment of institutions contribute to those student success outcomes. There are studies that engage in the discussion of defining and assessing campus climates or identifying aspects of campus environment; however, they fail to relate these factors to their role in student persistence from a different theoretical framework (Cuellar & Johnson-Ahorlu, 2016; Hotchkins & Dancy, 2017; Hutchinson, Raymond, & Black, 2018; Johnson et al., 2014; Jones, 2013; Soto & Deemer, 2018; Worthington, Navarro, Loewry & Hart, 2008). The research that has done so is recent and has focused on particular racial/ethnic minority groups (Cuellar & Johnson-Ahorlu, 2016; Hutchinson et al., 2008; Jones, 2013; Worthington et al., 2008). More research regarding community college students is needed to develop best practices within the community college system.

Statement of the Problem

Community colleges have been, and remain, an integral part of the educational hierarchy; however, the national persistence, completion and graduation rates of these institutions are dismal. The National Student Clearinghouse (2015) reported that only 39% of all community college students graduate within six years. Student persistence leads to graduation. Understanding what makes a student stay or leave an institution will provide insight on initiatives community colleges can implement to increase these rates. Studies regarding student persistence oftentimes look at student characteristics (Fike & Fike, 2008; Nakajima et al., 2012;
Rigah-Oiler & Kurpius, 2015), and discussions on campus environment typically focus on the experiences of racial/ethnic minorities (Cuellar & Johnson-Ahorlu, 2014; Griffin et al., 2015; Hotchkins & Dancy, 2017). Student satisfaction surveys have evaluated students’ perceptions of the campus environment; however, most studies have done so through the lens of Tinto (1993) and Astin (1984). These theoretical frameworks have been instrumental in establishing a foundation for understanding student persistence; however, an additional lens is needed when exploring student persistence at the community college level.

The research problem is rooted in the need to better understand how the diverse and complex environment of the community college impacts students’ perceptions, sense of belonging and ultimately their decisions to persist. This study utilized Museus’ Culturally Engaging Campus Environment (CECE) Model of College Success (Museus, 2014) to provide an inclusive exploration of students’ perceptions of the campus environment at a rural community college in the southeastern part of the US.

**Purpose of the Study**

The purpose of this quantitative study was to determine if students’ perceptions of campus environment and sense of belonging influence persistence decisions for students at a rural community college in the fall of 2019. The study used the CECE Survey for Community Colleges (Museus et al., 2017). The current study contributes to the understanding by advancing knowledge about how campus environment perceptions and sense of belonging impact persistence decisions among community college students attending a rural community college in the southeastern part of the US.
Research Questions (RQs)

Research questions that guided this study were:

1. What effect do student perceptions of campus environment have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students at a rural community college?

2. What effect do student perceptions of sense of belonging have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students at a rural community college?

3. Are there significant differences among students’ perceptions of campus environment and sense of belonging based on racial/ethnic and/or gender identities?

4. Are there significant differences among students’ perceptions of campus environment and sense of belonging based on residential or commuter status?

Definition of Key Terms

1. Academic Integration: Theory of student retention that explains the level to which a student begins to accept and adopt pieces of the institution’s intellectual beliefs and values within the classroom (Townsend & Wilson, 2009).

2. Campus Climate: The current patterns and behaviors within an institution and the perceptions the constituents within these institutions have or experience (White-Mair, 2017).

3. Campus Culture: Term that envelopes all curricular and co-curricular experiences (Denson & Chang, 2015) and is shaped by historical (the institution’s past exclusion or
inclusion of diverse groups), organizational (campus structures, practices and policies that support group-based privilege or oppression), compositional (the number of diverse students and staff on campus), psychological (perceptions of intergroup relations, discrimination and racial conflict) and behavioral (interactions or contact among and within different groups on campus) dimensions (Cuellar & Johnson-Ahorlu, 2016).

4. Campus Environment: The institutional surroundings that encompasses both campus climate and cultures. In the context of this study, it describes both physical and psychological spaces that change based on climate and culture (Wright-Mair, 2017).

5. Cultural Integration: Refers to the ways in which educators integrate academic, social and cultural elements into singular spaces, curricula, programs, practices, and activities to empower students to create conditions for them to strive (Museus et al., 2017).

6. Gender Identity: A person’s deeply felt, inherent sense of being a girl, woman, or female; a boy, a man, or a male; a blend of male or female; or an alternative gender (American Psychological Association, 2015). The variations of gender identity include having gender (Man, Woman, Transman, Transwoman); having no gender (Agender); incorporating aspects of both male and female gender (Androgyne); being to some extent but not completely one gender (Demigender); or moving between genders (Genderqueer/Gender-fluid; Dess, Marecek, & Bell, 2018).

7. Persistence: The continued full-time enrollment from semester to semester.

8. Sense of Belonging: Students’ psychological sense of connection to their community (Hurtado & Carter, 1997).
9. Social Congruence: A normative fit between the student and the values, social rules, and academic quality of the college community (Deil-Amen, 2011).

10. Social Integration: It is explained as the level to which a student begins to accept and adopt pieces of the institution’s non-academic or social beliefs and values outside of the classroom (Townsend & Wilson, 2009).

Theoretical Framework

The theoretical framework utilized for this study relied on Museus’ (2014) CECE Model of college success. This framework is based upon two decades of research and incorporates the cultural critiques of Tinto’s theory of student integration (Museus, 2014). The model is grounded in the voices of all students regardless of racial/ethnic background and consists of a set of propositions that can be quantified and tested (Museus, 2014). The CECE Model acknowledges that external influences (e.g., financial factors, employment, and family influences) and precollege inputs (e.g., academic preparation and academic dispositions at the time of entry) shape college success outcomes (e.g., learning, persistence, and degree completion). The core of the CECE Model emphasizes that college students’ access to culturally engaging campus environments is positively correlated with individual influences (e.g., sense of belonging, academic self-efficacy, motivation, intent to persist, and performance) on success and an increased probability of succeeding in college (Museus, 2014). The CECE Model proposes that undergraduates’ access to culturally engaging campus environments is associated with higher levels of sense of belonging and a greater likelihood of success within the institution (Museus, 2014).
The nine elements of the CECE model are separated into two categories: cultural relevance and cultural responsiveness. Cultural relevance refers to the degree to which students’ campus environments are relevant to their cultural backgrounds and identities (Museus, 2014). Cultural relevance is characterized by the following five characteristics (Museus, 2014):

1. Cultural familiarity - the extent to which students have opportunities to physically connect with faculty, staff and peers who understand their background and experiences.
2. Culturally relevant knowledge - the degree to which students have opportunities to learn and exchange knowledge about their own cultural communities.
3. Cultural community service - opportunities for students to give back and positively transform their communities via activities aimed at spreading awareness, engaging in community activism, participating in service, or engaging in problem-based research to solve problems relevant to their cultural communities.
4. Meaningful cross-cultural engagement – students’ levels of participation in discussions about solving real social and political problems with peers from diverse backgrounds.
5. Culturally validating environments – the extent to which students feel that their cultural knowledge, backgrounds, and identities are valued by their respective campuses.

Cultural responsiveness refers to the extent to which campus programs and practices effectively respond to the needs of culturally diverse student populations (Museus et al., 2017).
Cultural responsiveness is characterized by the following four characteristics (Museus et al., 2017):

1. Collectivist cultural orientations – the extent to which campuses are characterized by values of teamwork and mutual success, rather than individualism and competition.

2. Humanized educational environments – Environments in which institutional agents care about, are committed to, and develop meaningful relationships with students.

3. Proactive philosophies - The behavior of institutional agents who go above and beyond making information, opportunities, and support available to ensuring that students have knowledge and take advantage of that information, opportunities and support.

4. Holistic support – the extent to which students have access to at least one faculty and staff member who they trust to provide information and support that they need, or connect them to that information and support, regardless of the question or problem they face.

This theoretical model does not eliminate the previous student development work of Tinto (1993) or Astin (1984); however, it attempts to add an additional lens to evaluate the persistence factors of community college students, an area that has not been as widely studied as the perceptions and experiences of students attending 4-year institutions.

**Overview of Method**

The goal of this research was to provide insight into how students’ perceptions impact their decisions to persist at a large, public rural community college. Participants were administered the CECE Survey for Community Colleges (Museus et al., 2017). The CECE
Survey for Community Colleges (Museus et al., 2017) is a 42-item survey that asked students various questions to collect data on sociodemographic characteristics, perceptions of opportunities to engage in cultural learning opportunities, availability of resources, trustworthiness and support of staff and students, and their sense of belonging. Other questions asked the student to select to what degree he/she wanted to attend college before attending college, what degree he/she want to complete since enrolling, and whether he/she intends to complete the degree at the specific institution. Questions asked participants to identify what community meant to them as respondents were answering the questions. The survey was administered electronically and took approximately 15 minutes to complete.

**Target Population**

The study attained participants from one community college in the southeastern part of the United States. According to the current Carnegie classification (The Carnegie Classifications of Institutions of Higher Education, 2018), the community college being studied is a large, 2-year institution with a medium full-time enrollment profile and degree offerings for associate degree, vocational and technical certificates, and transfer options. The community college has six locations, with two of those locations offering on-campus student housing. The study solicited responses from each campus location. The Institutional Research office of the community college assisted in the administering of the survey to students at this institution.

**Sampling Methods**

The study asked full-time and part-time community college students at all campus sites to participate in the survey. Participants had to be enrolled in at least one traditional-style course. Students who were considered online students were excluded from the research as the
exploration of campus environment requires that the student have a physical interaction with individuals or groups within the campus. The researcher worked with the Institutional Research office at the community college being studied to have the survey emailed to these students. The survey was created and administered via a web link created through Survey Monkey®.

Data Collection Plan

All data were collected via the survey. Previous research has stated that the community college student population has a larger population of racial/ethnic minorities and students from low socioeconomic statuses (Wyler, 2014). Data collection allowed the researcher to compare the sample to national and state community college population trends. Table 1 lists the research questions, data to be collected, and statistical analysis methods.
Table 1

Research Questions, Survey Items and Data Analysis Procedure Descriptions

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<tr>
<th>Research Questions</th>
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<td>Correlation Analysis</td>
</tr>
<tr>
<td>Correlation between sense of belonging perceptions and persistence decisions</td>
<td>Items 3, 5, and 9</td>
<td>Correlation Analysis</td>
</tr>
<tr>
<td>Differences among perceptions of campus environment and sense of belonging based on racial/ethnic and gender identities</td>
<td>All items.</td>
<td>Analysis of variance (ANOVA)</td>
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<tr>
<td>Differences among perceptions of campus environment and sense of belonging based on residential status</td>
<td>Items 10-49 collected demographic data</td>
<td>T-test</td>
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Data Analysis Plan

Correlation analysis were conducted to determine the relationship between campus environment perceptions and persistence decisions. It also was conducted to determine the relationship between sense of belonging perceptions and persistence decisions. Then, an ANOVA was utilized to examine differences in perceptions of campus environment and sense of belonging between and within racial/ethnic groups. Additionally, a t-test was utilized to examine differences between residential and commuter students.

Delimitations of the Study

This study had the following delimitations.

- Participants only included students who were enrolled in at least one traditional-style course. Online students were excluded. Perceptions of campus environment
require that students attend a physical campus; therefore, online students were not able to provide insight on this variable.

- The study was only conducted at one community college.
- The study was only conducted for one semester.
- Perceptions were only ascertained by student responses on the CECE Survey for Community Colleges.

**Significance of the Study**

The cost of higher education, even at the community college level, is heavily discussed. The public is more concerned with ensuring these institutions are doing what they were created to do. It is up to college administrators to ensure that students are entering into environments that will contribute to their success. Initiatives and policies that accomplish this goal take into consideration the student and institutional culture. This study expands the literature on the impact of student environments on student persistence decisions and may ultimately help institutional agents rethink how programs and classes are offered within the community college setting.

**Chapter Summary**

The completion of this study contributes additional information to community college student affairs professionals as they attempt to increase persistence and graduation rates among community college students. The study included students from one large community college in the Southeastern United States. Surveying multiple students within one campus environment provided the opportunity to explore how students can experience college within the same time frame and geographic location but view the college differently. The goal was to find ways to
increase the persistence and graduation rates of community college students by taking a closer look at what makes a student stay or leave. Decades of student retention research has focused on large 4-year institutions (Rigali-Oiler & Kurpius, 2013; Tinto, 1993; Wei et al., 2011; Wolniak et al., 2012). Extant research that focuses on the retention of 2-year and 4-year college students relies on the work of Astin (1984) and Tinto (1993). Tinto’s (1993) and Astin’s (1984) theories have been essential in creating programmatic efforts used to retain students; however, these theories neglect the reality of a significant portion of community college students.

Community colleges historically serve a large number of underrepresented students (Cohen et al., 2014) a population that was historically excluded from early studies regarding student development and retention. Additionally, three-fourths of community college students have jobs with over a quarter working full-time; and three in five students enter community colleges unprepared to do college-level work (Wyner, 2014). The use of Museus’ CECE Model (Museus, 2014) provided a theoretical framework that adds to the existing lens of student development work by expanding the type of students and environment that have been studied. The CECE Model has been used to assess the campus environment of culturally diverse campuses and student experiences. The model provides an additional approach to understanding why students decide to remain or leave an institution by examining how pre-college characteristics and campus environment influence individual perceptions (Museus, 2014) as measured by the CECE Survey for Community Colleges (Museus et al., 2017). The next chapter provides a review of the literature that is foundational to this study.
CHAPTER II
LITERATURE REVIEW

Introduction

Community colleges are 2-year higher education institutions that have provided educational opportunities at a much more cost-effective approach than 4-year institutions since the early 1900s (Cohen et al., 2014). Since then, community colleges have been inclusive institutions that provide learning opportunities to all who desire to learn despite race, gender, socioeconomic status, or previous academic experiences. Community colleges began to address the needs of the area in which it served by "providing adult education and educational, recreational, and vocational activities and placing its cultural facilities at the disposal of the community" (Cohen et al., 2014, p. 26). Community colleges serve a disproportionately large percentage of the nation’s low-income and underrepresented minority students (Cohen et al., 2014; Mamiseishvili & Deggs, 2013). Historically, these populations have had little or no access to higher education opportunities and are often identified as at-risk populations within the higher education system.

Within the past few years, there has been a more intentional focus on the role community colleges play with not only providing access to higher education but preparing individuals for a global workforce. Community colleges now more than ever have to answer the question of how they will meet the demands placed upon them by the twenty-first century. Not only that, legislators and policy makers are increasingly moving towards a performance-based model that
emphasizes the importance of student success outcomes. Literature regarding persistence and completion have traditionally taken place within large, public 4-year institutions (Rigali-Oiler & Kurpius, 2013; Tinto, 1993; Wei et al., 2011; Wolniak et al., 2012). However, the community college student and the 4-year student have significant differences in terms of academic preparation and responsibilities that require a separate look into why community college students are not persisting at higher levels (Barbatis, 2010; Fike & Fike, 2008; Nakajima et al., 2012; Wyner, 2014). According to Wyner (2014), three-fourths of community college students have jobs, with over a quarter working full-time, and three in five students enter community colleges unprepared to do college-level work. Additionally, the Community College Research Center (2017) reports that 58% of high school graduates who entered community colleges took at least one developmental course, and only approximately 28% went on to earn any degree or certificate within 8.5 years.

Research regarding persistence and completion of college students is not a new concept; however, the discussions regarding how campus environments impact persistence decisions for some students and not others are more recent. Additionally, retention studies were traditionally predictive in nature (Fike & Fike, 2008; Nakajima et al., 2012; Rigali-Oiler & Kurpius, 2013). Scholars looked towards student characteristics such as socioeconomic status, high school GPA and ACT scores to determine whether a student would be more likely to persist. It appears that institutions relied on utilizing these characteristics to develop programs or initiatives to help students succeed. However, the persistence rates of community college students indicate that there may be a flaw in the system. The conversations regarding retention shifted as literature explored how individual students’ perceptions and experiences impacted persistence decisions (Cuellar & Johnson, 2016; Griffin et al., 2015; Johnson et al., 2014; Soto & Deemer, 2018;
Worthington et al., 2008). Worthington et al. (2008) investigated 144 students’ perceptions of
general campus climate for racial-ethnic minorities at a large predominantly white, Midwestern
university and found that white students often perceived the campus climate more positively than
did racial-ethnic minorities. These findings are similar to findings in subsequent studies where
students’ perceptions were measured (Griffin et al. (2015; Museus et al., 2008; Nelson-Laird &
Niskode-Dossett, 2010; Wei et al., 2011)) revealed that differences in student experiences occur
within and across racial/ethnic groups. Hutchinson, Raymond and Black (2008) found that
perceptions and experiences also vary between gender groups.

This chapter is the result of a review of literature conducted with the goal of exploring
how students’ perceptions of campus environment impact persistence decisions of community
college students attending a rural community college. A systematic review of the literature was
conducted using educational databases to search the terms perceptions of campus climate and
persistence, campus environment, standards, attitudes and beliefs of faculty, staff, and students
and persistence, behaviors of students and staff and persistence, and community college students.
The question guiding the literature review is: How do the perceptions of campus environment
and sense of belonging impact the persistence decisions of community college students at a rural
community college?

The chapter begins with research regarding the demographics of the student body at
community colleges and how it differs from the populations found within 4-year institutions as
well. It then provides literature regarding the persistence rates of community college students. It
will continue to discuss how students assess the campus environment through campus climate.
The review will continue with the presentation of studies relevant to persistence decisions,
campus climate and environment and factors impacting the persistence rates of community
college studies. The review will conclude with a discussion of key points related to the research topic and the role the proposed study will play in addressing specific gaps within the literature.

**Persistence Rates and Community College Students**

Completion rates at community colleges are extremely low with less than one-third of the students entering community college completing a degree or certificate within 8.5 years (Community College Research Center, 2017). It is understood that no one enters college with the intent to not continue or finish. However, something occurs to where the majority of those who enter ultimately decide to depart before receiving a degree or certificate. Several reasons to why this phenomenon exists have been provided over time. Fike and Fike (2008) examined factors such as student demographics and number of enrolled hours and course type (i.e., traditional, developmental, online) to determine which factors could predict the student retention among 9,200 first-year freshman at an urban community college in Texas and found that the strongest predictor in student retention is whether a student passes a developmental reading course. The predictor approach is common in retention studies for 2-year and 4-year institutions; however, the findings differ from study to study. Predictors of retention are attributed to perceptions of the institutional environment and self-beliefs (Rigali-Oiler & Kurpius, 2013), course type (Fike & Fike, 2008), student demographics (i.e., race, gender, age, parents’ education level, etc.) and GPA (Nakajima et al., 2012; Windham et al., 2014). The discussion of student demographics is prevalent among retention studies, especially in community college literature, due to the belief that the community college student significantly differs from a student who attends a 4-year institution (Deil-Amen, 2011; Fike & Fike, 2008; Jones, 2013; Majer, 2009; Perrakis, 2008; Windham et al., 2014). Community colleges serve large proportions of racial/ethnic minorities as well as those from low socioeconomic statuses. These students are considered at risk for
completing college degrees (Windham et al., 2014). Students who work more hours off-campus are also least likely to complete (Crisp et al., 2015). Lastly, the community college student statistically is less involved than traditional 4-year students due to external personal commitments that most possess (Cohen et al., 2014; Johnson et al., 2014). Nevertheless, community colleges were designed with these individuals in mind. One benefit of the community college is that it allows individuals to attend college while still participating in activities or fulfilling responsibilities in their personal and private lives. It is evident that there are some barriers to completion that will continue to be misunderstood if practitioners continue to rely on research that was solely conducted at 4-year institutions.

Discussions regarding student retention first appeared 40 years ago and typically focused on the individual attributes, skills, abilities and motivation (or lack thereof) of the student (Mamiseishvili & Deggs, 2013). The focus of retention studies did not begin to change until the 1970s, when discussions of how the relationships between the individual and the environment impacted retention rates (Cuellar & Johnson, 2016; Griffin et al., 2015; Johnson et al., 2014; Mamiseishvili & Deggs, 2013; Soto & Deemer, 2018; Worthington et al., 2008). However, even these discussions mainly focused on the learning environment of public 4-year institutions and were largely quantitative in nature. The exclusion of community college environments in these discussions has caused college administrators to rely on data that are not always applicable to the community college environment or students’ experiences.

A student’s decision to persist is attributed to several factors. There are predictive factors that should be considered when determining whether a student will persist. Predictive factors are often related to entry characteristics such as age, high school GPA, ACT score, feelings of preparedness, and socioeconomic status (Fike & Fike, 2008; Nakajima et al., 2012). Institutions
began relying on these factors to identify at-risk students. Students who were academically unprepared were often placed in developmental reading and/or math courses. Other characteristics such as social and psychological skills have considered when determining whether a student will persist. Whether a student persists is a combination of the interaction of psychological characteristics, socio-demographic factors and his/her perception of the campus environment (Barbatis, 2010; Denson & Chang, 2015; Johnson et al., 2014; Windham et al., 2014). This shift in understanding why a student persists created the understanding that educational institutions play a role in the mitigation of institutional barriers that hinder persistence (Denson & Chang, 2015; Jones, 2013; Museus et al., 2008).

An achievement gap still exists among groups within higher education institutions when it comes to persistence rates. White students are persisting and completing at higher rates than their racial/ethnic minority counterparts (Cole, 2010; Gipson, Mitchell, Jr., & McLean, 2017; Martin, Spener, & Mustillo, 2017; Museus et al., 2008; Strayhorn, 2012). These completion differences not only exist between Whites and racial/ethnic minority students, but also between other racial/ethnic minority groups. Asian Americans are graduating at higher rates than Latino/a and African American students (Martin et al., 2017; NCES, 2017). Additionally, there are differences within racial/ethnic minority groups. African American and Latina females are completing at higher rates than African American and Latino males (Martin et al., 2017).

Persistence rates are connected to completion rates. Students who persist through their first semester are more likely to graduate, especially within the community college setting (Windham et al., 2014). Understanding what leads to students persisting ultimately provides insight on how to achieve higher completion rates. The persistence discussion requires a multidimensional approach that considers the role that personal characteristics and campus
environment play on persistence decisions. Conversations about student retention have not always included the community college student or have focused specifically on underrepresented groups (Cole, 2011; Hoxby & Avery, 2013; Strayhorn, 2012). Research that examines these factors among rural community college students is needed.

**Student Perceptions of Campus Environment**

The terms campus climate, campus culture and campus environment are often used interchangeably throughout literature to describe the perceptions and experiences of various populations on a campus (Hart & Fellabaum, 2008). However, it is important to highlight the differences between these terms in order to effectively understand how they contribute to the students’ perceptions and experiences (Kuh, 2009). Culture strongly influences campus climate; therefore, it is necessary to include a discussion of culture and climate in order to better understand the definition of campus environment.

Campus culture is a very complex concept that is shaped by internal and external forces (Kuh, 2009). Some of these forces are associated with the individual, while others are attached to the institution. The most comprehensive definition of campus climate originates from the work of Hurtado (2012) in which campus climate is comprised of several dimensions. This definition aligns with the current concepts which state campus climate envelopes all curricular and co-curricular experiences (Denson & Chang, 2015) and is shaped by historical (the institution’s past exclusion or inclusion of diverse groups), organizational (campus structures, practices and policies that support group based privilege or oppression), compositional (the number of diverse students and staff on campus), psychological (perceptions of intergroup relations, discrimination and racial conflict) and behavioral (interactions or contact among and within different groups on campus) dimensions (Cuellar & Johnson-Ahorlu, 2016).
Campus climate has been a broadly-used term to assess the “feel” of a campus. The multiple definitions have attempted to provide an understanding of what contributes to the feel of a campus. Some of the literature defines campus climate as the perceptions of supportiveness and accessibility of the institution and its members (Hutchinson et al., 2008). This definition helps one to understand the subjectivity to which campus climate is measured. Other definitions provide a more specific description that is related to the diversity and the experiences of racial/ethnic minorities and other marginalized groups in terms of discrimination and unfair treatment (Griffin et al., 2015; Hutchinson et al., 2008; Soto & Deemer, 2018; Worthington et al., 2009), engagement in activities that promote diverse experiences (Jones, 2013), and how diversity-related issues are incorporated into classroom activities or discussions (Lundberg, Kim, Andrade & Bahner, 2018). However, some argue that these definitions only shed light on a small section of what campus climate completely embodies. Some state that campus climate is defined as the perceptions of current attitudes, behaviors and standards of faculty, staff, administration, and students concerning the level of respect for individual needs, abilities and potential (Hart & Fellabaum, 2008). This definition acknowledges the individual and group interactions and expectations that shape students’ perceptions. This definition is very close to the definition that is used for this study. For the purpose of this study, campus climate is defined as the current patterns and behaviors within institutions and the perceptions that constituents within these organizations have or actually experience (White-Mair, 2017). Campus climate is ever-changing and is impacted by current events, inside and outside of the institution.

While there may be many broad definitions, it can be stated that the perceptions of campus culture are assessed by the experiences the students have in and outside of the classroom. Understanding what campus culture is helps shape the understanding of how it influences the
decisions of students to persist or not. Culture interacts with education, thus what students perceive either directly or indirectly influences their behaviors and ultimately impacts their decisions to persist (Martin et al., 2014). These beliefs and perceptions can directly or indirectly determine how a student behaves in academic and social settings within the institution (Deil-Amen, 2011; Denson & Chang, 2015; Hotchkins & Dancy, 2017). Students who perceive the campus as warm and supportive are more likely to persist and complete (Deil-Amen, 2011). Students who feel comfortable on the campus often engage in more activities compared to those who perceive the campus as unwelcoming (Hotchkins & Dancy, 2017; Johnson et al., 2014).

Wei et al. (2011) examined whether perceptions of university environment mediated the association between minority status and college persistence attitudes after controlling for perceived general stress among 160 Asian American, African American, and Latino American students attending a public white university. Utilizing a survey comprised of three instruments to measure perceived general stress, minority stress and perceptions of the university environment, Wei et al. (2011) found that racial/ethnic minorities reported lower levels of perceived positive campus environments across racial groups.

Low and negative campus environment perceptions among these groups can add to stress levels and impact whether a student decides to engage in academic or social activities (Wei et al., 2011). Thus, members of racial and ethnic minority groups who are likely to also experience stress related to their minority status identity are more likely to withdraw from activities, if not from the institution all together (Wei et al., 2011). Decades of prior research has stressed the importance of academic and social interaction in the success of college students, and student development theory by Astin (1984) and Tinto (1993) has supported the idea that successful students are those who integrate themselves into the academic and social fabric of the institution.
With that being known, campus environment can be seen as a mediator of such occurrences (Deil-Amen, 2011). Deil-Amen (2011) argues that academic and social integration in the traditional sense is hard to apply to the community college student due to the fact that most community college students are not able to fully separate from family and assimilate into their academic community as Tinto (1993) suggests. However, connections and interactions with faculty, staff and other students have been found to be beneficial for community college students (Deil-Amen, 2011; Denson & Chang, 2015; Lundberg et al., 2018; Museus et al., 2008).

Perceptions of campus environment are not the only lens that can be used to explore persistence decisions of community college students, but it is an important one. How a student perceives the feel of the campus and how he/she fits into that environment impacts so many other behaviors and attitudes of the student (Deil-Amen, 2011; Denson & Chang, 2015; Jones, 2013; Lundberg et al., 2018; Museus et al., 2008). Students who perceive that the faculty or staff are not attentive to their personal needs may disengage from the class or be reluctant to ask for assistance with personal issues (Lundberg et al., 2018). These beliefs and experiences, whether intentional or not, become the lens through which the student frames his/her college experience and whether it is worth the time, energy and effort to continue (Denson & Chang, 2015). The experience may look different for each student; however, the description of those experiences remains consistent. Campus environment has to be understood within the context of the student’s identity (Fike & Fike, 2008). This study took an inclusive look into these perceptions and experiences due to the fact that research suggests that students on the same campus experience the campus differently by allowing the student to not only share his/her experience but to disclose the constructs of his/her identity in an effort to gain clearer understanding of what experiences affect student persistence decisions.
Students’ Sense of Belonging

Sense of belonging has been defined in several ways as it has been studied within the realms of secondary and postsecondary education (Gummadam, Pittman & Ioffe, 2016). Bollen and Hoyle (1990) stated that a sense of belonging contains both cognitive and affective elements in that the individual’s cognitive evaluation of his/her role in relation to the group results in an affective response. Haggerty, Lynch-Sauer, Patusky, Bouwsema and Collier (1992) defined it as “the experiences and personal involvement in a system or environment so that persons feel themselves to be an integral part of that system and environment (p. 173).” This study utilized the definition provided by Hurtado and Carter (1997) which defines sense of belonging as the students’ psychological sense of connection to their community. This definition highlights the fact that sense of belonging is not a trait, but more so a psychological state that can change as the students’ community changes (Hurtado & Carter, 1997). Community interaction within classrooms, residence halls and among social groups can generate different views of sense of belonging from the same individual (Gummadam et al. 2016). Within the higher education discussion, it is not uncommon for the conversation regarding sense of belonging to take place within the context of campus environment or campus climate (Hotchkins & Dancy, 2017; Martin et al., 2014; Wei et al., 2014).

While sense of belonging has been widely discussed in higher education, it has often focused on the experiences of racial/ethnic minorities at 4-year institutions (Booker, 2016; Hurtado & Carter, 1997; Murphy & Zirkel, 2015; Shook & Clay, 2012). Such studies centered the conversation on how members of racial/ethnic minority groups operate in environments where they may be the racial minority (Booker, 2016; Hurtado & Carter, 1997; Murphy & Zirkel, 2015; Maramba & Museus, 2011; Museus & Maramba, 2011; Museus & Nichols, 2008).
However, none of these studies included students’ experiences at community colleges. Community colleges are often left out of higher education research studies because of the complex dynamics of their campus environment and student population (Deil-Amen, 2011; Fike & Fike, 2008; Windham et al., 2014). When sense of belonging has been studied among college and university students, it has been used as a way to predict factors of student success (Cham, Hughes, West, & Im, 2014; Hurtado & Carter, 1997) or impact student performance (Booker, 2016; Curtis, Stewart & Ostrue, 2013; Murphy & Zirkel, 2016; Wilson & Gal, 2013). Often times, these studies lead into conversation about which interactions, social or academic, impact the student the most regardless of the interaction.

Sense of belonging needs to be understood from the perspective of community college environments. The differences in the demographics of community college students contribute to other diverse campus environments of community colleges; therefore, an additional lens must be used to examine how sense of belonging influence students’ decisions to persist. Tinto (2001) states that students may leave college for several reasons: academic difficulty, adjustment problems, unclear goals, lack of commitment, inadequate finances or poor institutional fit. The community college was created to address some of the challenges he discusses; however, research as to whether these institutions are meeting these needs is still lacking. This study took a closer look into the impact of sense of belonging on persistence decisions of community college students in an attempt to provide more understanding on what the institution can do to create and maintain environments that foster positive student outcomes, such as higher persistence and completion rates.
Review of Relevant Studies

Over the years, student retention discussion has developed to include exploration of student characteristics and/or campus environment impact. Rigali-Oiler and Kurpius (2013) explored factors that influenced persistence decisions among 346 racial/ethnic minorities and 813 European American freshman and sophomore students at a predominantly white, Midwestern university. Utilizing the Self-Esteem Scale (Rosenberg, 1965), the Educational Degree Behaviors Self-Efficacy Scale (Gloria, Robinson Kurpius, Hamilton, & Wilson, 1999), The University Environment Scale (Gloria & Robinson Kurpius, 1996), the Multidimensional Inventory of Black Identity (Sellers, Rowley, Chavous, Shelton, & Smith, 1996) and the Persistence Voluntary Dropout Decisions (Pascarella & Terenzini, 1980), the researchers comprised a survey that sought to find the answer for three hypotheses. The first hypothesis stated that “male and female students will differ in racial/ethnic identity, self-beliefs, perceptions of the university environment, and academic persistence decisions” (Rigali-Oiler & Kurpius, 2013, p. 201). The second hypotheses stated that racial ethnic minorities (REM) “students will differ from European American students in racial/ethnic identity, self-beliefs, perceptions of the university environment, and academic persistence decisions” (Rigali-Oiler & Kurpius, 2013, p. 201). The third hypothesis stated that “racial/ethnic identity, perceptions of the university environment, and self-beliefs will predict academic persistence decisions for both REM and European American students” (Rigali-Oiler & Kurpius, 2013, p. 201). Multivariate data analysis procedures were used to examine the research hypotheses.

Rigali-Oiler and Kurpius (2013) found that perceptions of the university environment and self-beliefs predicted persistence decisions for everyone. It was also found that students were most likely to persist when they held positive regards of the university environment (Rigali-Oiler...
Regard was measured by the Multidimensional Inventory of Black Identity (Sellers et al., 1997), which defined regard as having two components, public and private (Rigali-Oiler & Kurpius, 2013). Public regard is defined as the private feelings one has about his/her identity (Rigali-Oiler & Kurpius, 2013). Private regard captures the perceptions of how others feel and believe about his/her own racial identity/group (Rigali-Oiler & Kurpius, 2013). Public and private regard can be either positive or negative. During the analysis of this study, Rigali-Oiler and Kurpius (2013) found that European Americans’ racial identity was not as central to their identity as REM students; however, the European American students scored public regard as more important than their racial identity. For REM students, private regard was found to be more important than public regard; however, their perceptions of the university environment found than REM males perceived the campus more negatively than did REM females (Rigali-Oiler, 2013). This was due to the perception that revealed that REM females felt as though they received more positive messages about their identity that did REM males (Rigali-Oiler & Kurpius, 2013). The findings of this study reveal that university environment does impact student populations differently, and while it may not fully predict a student’s persistence decisions, it does provide insight to what may shape the student’s experiences.

Wolniak et al. (2012) explored the effects of students’ background characteristics; measures of social, human, and financial capital; social and academic integration; and institutional environment on student learning and college persistence. The following two questions were addressed in this study: (1) “Do measured dimensions of student learning at the end of the first college year affect the likelihood of persistence into the second college year?” (p. 800) and (2) “Do the relationships between student learning and persistence found in question one remain after controlling for differences in academic and social integration during the first
year of college?” (p. 802). Utilizing data from the 2006-07 Wabash National Study of Liberal Arts Education (WNSLAE), the information of 2,349 full-time students attending one of 16 4-year institutions were analyzed to determine the effect of various factors on student persistence and whether those differences remain after controlling for differences in academic and social integration (Wolniak et al., 2012). This longitudinal project was designed to support research on individual and environmental factors affecting student learning. Wolniak et al. (2012) used Tinto’s theory of student departure (1993) as the theoretical framework for their study. Additionally, Wolniak et al. (2012) utilized the National Leadership Council for Liberal Education and America’s Promise to formulate a model of student learning outcomes. This model contained five measures of student learning including Socially Responsible Leadership (Tyree, 1998), Intercultural Effectiveness (Fuertes et al., 2000; Mivello et al., 1999), Inclination to Inquiries and Lifelong Learning (Cacioppo & Petty, 1982) and Moral Reasoning (Rest et al., 1999; Wolniak et al., 2012). The fifth measure of student learning, Conceptual Mastery, was captured by using the end-of-the-year GPA of the first-year college students. Wolniak et al. (2012) also created a series of follow-up assessments that were related to the students’ college experiences during their first year of college and were used to derive the measures of social and academic integration. Social integration was measured using an 8-item factor scale that reflected cocurricular activities, and academic integration was measured using a 10-item composite measure of perceptions of teaching clarity and a 4-item indicator of frequency of students’ interactions with faculty (Wolniak et al., 2012). Demographic, socioeconomic and academic background characteristics were measured by the following variables: sex, race/ethnicity, mother’s and father’s educational attainment, parent’s income, students’ income, precollege characteristics (e.g., composite measures of ACT or converted SAT scores) and educational
aspirations (whether a student aspired to attain greater than a 4-year degree; Wolniak et al., 2012).

A preliminary analysis tested for differences between persisting and non-persisting students by examining mean values within each group across each variable (Wolniak et al., 2012). Next, Wolniak et al. (2012) estimated a series of multivariate logistic regression models predicting the likelihood of second-year persistence. Lastly, they ran separate regression models for each scaled measure of student learning acquired from the first assessment (Wolniak et al., 2012). Results indicated that students who persisted into their second year of college were more likely than non-persisters to have parents with at least a 4-year college degree and have higher scores on the ACT or SAT (Wolniak et al., 2012). Additionally, persisting students reported higher levels of academic and social integration during their first year of college and related exposure to quality teaching, frequency of faculty contact, peer interactions and cocurricular involvement while also demonstrating greater mean scores on leadership, need for cognition and content mastery (Wolniak et al., 2012). The major conclusion from this study is that persistence decisions are influenced by overall mastery of course content and the extent to which students possess values such as equity, social justice, self-knowledge, citizenship and commitment towards social change as measured by the leadership construct (Wolniak et al., 2012). Wolniak et al. (2012) concluded that academic integration was a relatively weak link to persistence and that teaching practices within the classroom setting had a stronger positive influence on persistence than frequency of interaction with faculty.

Wolniak et al.’s (2012) study is contradictory of the findings of previous studies, especially those that involved community colleges (Barbatis, 2010; Fike & Fike, 2008; Lundberg et al., 2018) as it found that students’ social interactions with peers served as a better predictor of
Barbatis (2010) conducted a qualitative study to gain an understanding to what 22 students (6 graduates, 12 persisters, and 4 dropouts) at a large, urban community college in the southeastern United States attributed their graduation or incompletion. Individual interviews were conducted with each participant, as well as a focus group, to reveal that that students who persisted and graduated had qualitatively different perspectives than those who did not. The sample consisted of 17 women and 5 men who ranged from 19 to 46 years of age. Many participants were within one or two semesters of graduation. Persisters included nine women and three men; seven students were Black and self-identified by their cultural identities, three students were Hispanic, and two students were White-non-Hispanic. The study examined the effect of learning communities on college students’ attitudes toward college in order to identify factors which promoted or hindered student orientation.

Semi-structured one-hour to one and half-hour individual interviews were conducted face-to-face with all but one participant, and archived data (e.g., GPA, age, ethnicity, first-generation-in-college status, and learning community participation) was accessed with permission from all participants (Barbatis, 2010). The data collection was verified through triangulation of data sources, and the steps to develop the themes were verified through an external audit conducted by a peer reviewer. The transcripts and themes were then checked for accuracy by the participants. Barbatis (2010) identified precollege characteristics, external college support/community influences, social involvement, and academic integration as attributing to the success of the persisters and graduates. Persisters and graduates gave strong positive accounts of personal responsibility and determination, but also described a greater sense of belonging into the institution’s social and academic culture. Barbatis (2010) highlights that an important finding of the study was that human contact makes a significant difference when
moving students from poverty to college. While not all community college students come from poverty there is a significant number of students who come from lower socioeconomic statuses. Barbatis (2010) explains that persisters and graduates had frequent positive experiences with peers and college faculty and more frequently utilized campus resources. The study was framed by the theoretical frameworks of Tinto’s (1997) integration model and Astin’s (1984) model of student persistence as well as the critical theory of Kinchelor and McLaren (2000). The use of Kinchelor and McLaren’s (2000) critical theory was utilized to examine how race, class, gender, education and socioeconomic status interact to impact underprepared students’ success at an ethnically diverse college. In doing so, Barbatis (2010) highlighted how identity and culture interact and impact persistence decisions.

Lundberg et al. (2018) examined the effects of student-faculty interactions among 10,071 Latino/a students at 108 community colleges within the United States. Utilizing a sample that derived from students who participated in the Community College Survey of Student Engagement (CCSSE), Lundberg et al. (2018) sought to answer the following research questions: (1) What are the effects of discrete student-faculty interactions on student learning? and (2) How do those effects vary based on gender of Latina/o community college students? Lundberg et al. (2018) utilized student-level and institutional-level variables to conduct their study. Student-level variables included three dependent variables that were measures of student learning on student self-report about the amount of learning they gained as a result of their experience at their particular college. Students responded to 15 items on the CCSSE. Student-level variables also included seven independent variables. of which six gauged the frequency of which students received prompt feedback, discussed grades or assignments, talked about career plans, discussed ideas outside of class, worked hard to meet faculty standards, and worked with faculty on
activities outside of the classroom, and one gauged the quality of relationships with instructors by measuring students’ perceptions of faculty availability. Lastly, the study also identified 10 control variables that were also divided into institutional and student level. Control variables for the student level included student’s enrollment status, marital status, perceptions of support from family and friends, perceptions of institutional support, and perceptions of helpfulness of administrative staff. Institutional level control variables included the mean scores from the CCSSE in regard to instructional support for student success, friendliness of students, and helpfulness of administrative staff. Lundberg et al. (2018) employed a hierarchical linear model (HLM) to examine the association between student-faculty interaction and student learning and found that frequent high-quality interactions with faculty contributed to the persistence of these students. The findings suggested that across all institutions, students obtained “quite a bit” of gains is student learning outcomes as a result of their positive college experience (Lundberg et al., 2018). Student-faculty interactions seemed to contribute to students’ learning more often for women than for men, and men tended to benefit more from working hard to meet to the expectations of faculty versus the women who benefitted more from quality of relationships with faculty. The differences suggest that gender may uniquely shape the effects of certain types of student experiences with faculty (Lundberg et al., 2012).

Strayhorn’s (2012) study explored the factors that impacted persistence among 127 African American community college students using data from the 2004 Community College Student Experience Questionnaire (CSEQ). The CSEQ is a 191-item survey designed to elicit information about the quality and quantity of students’ experiences in the community college environment (Strayhorn, 2012). A multivariate analysis was used to investigate the following research question: What is the relationship between background traits, institutional
characteristics, degree goals, academic goals, academic outcomes, measures of social integration and satisfaction in college for African American males at 2-year community colleges? The theoretical framework for this study also included Tinto’s (1993) theories of student departure and Astin’s (1984) theory of student integration (Strayhorn, 2012). The correlation analysis revealed that 27% of the variance in Black males’ satisfaction of their college experience was attributed to the social integration factor (Strayhorn, 2012). Strayhorn (2012) explained that it is important to recognize the precollege characteristics of students and that these characteristics could produce challenges to student retention without institutional support. For some students, the interaction of identity and campus environment strongly influences the overall student experience (Lundberg et al., 2018; Strayhorn, 2012; Strayhorn & Johnson, 2014).

Research on this topic primarily discussed the perceptions of students at predominantly white 4-year institutions (Griffin et al., 2015; Hotchkins & Dancy, 2017; Hutchinson et al., 2008; Johnson et al., 2014; Soto & Deemer, 2018; Worthington et al., 2008). Initially, a synthesis of the literature regarding campus climate and 2-year institutions suggested that 2-year institutions were more supportive and welcoming than 4-year institutions due to their diverse student populations (Cuellar & Johnson-Ahorlu, 2016). Cuellar and Johnson-Ahorlu (2016) explored student perceptions of the campus climate at a Hispanic Serving Institution (HSI) community college in hopes to understand perceptions of discrimination and bias for students from different racial groups. The following research questions guided their study: (1) What are student experiences with discrimination and bias at an HSI community college? and (2) Do students’ perceptions differ by racial background? (Cuellar & Johnson-Ahorlu, 2016). Cuellar and Johnson-Ahorlu (2016) utilized the Multi-Contextual Model for Diverse Learning Environments (MMDLE), a conceptual framework that highlights internal and external factors that shape the
academic experiences and ultimately impacts the student success of undergraduate students. This model posits that campus climate envelopes all curricular and co-curricular experiences and is shaped by socio-historical, policy and institutional contexts (Cuellar & Johnson-Ahorlu, 2016). This model was specifically designed to understand compositionally diverse student institutions and the experiences of diverse students (Cuellar & Johnson-Ahorlu, 2016).

Cuellar and Johnson-Ahorlu (2016) administered the Diverse Learning Environments (DLE) survey to all undergraduates enrolled during the 2009-10 school year at Grove College, a federally designate HSI. The survey yielded a sample size of 818 students. A parallel mixed methods design was utilized to analyze data. The research project collected quantitative data through the survey and qualitative data from student focus groups that were conducted at five campuses, two community colleges and three 4-year institutions; however, only data from Grove College were included in this particular analysis. The findings revealed that while there was compositional diversity, Latina/o and Asian students still perceived discrimination and bias at the HSI community college. The findings suggest that compositional diversity does not automatically provide perceived safe spaces for racial/minority groups even when the institution is designed to serve that specific population. Qualitative results revealed that while students shared moments of equal treatment, they also shared moments where they experienced bias that was not always related to race (Cuellar & Johnson-Ahorlu, 2016).

Jones (2013) examined whether the racial composition of the community college student body correlated with an institution’s normative climate toward various diversity outcomes (e.g., student conversations with racially different peers, student conversations with peers holding different beliefs, and student understanding of racially different others). Positive educational outcomes are presumed to be affected by the amount and quality of student interactions with
diverse others in college and that racial diversity would result in more opportunities for students to engage with racially and culturally diverse others (Jones, 2013). Such interactions would provide a more engaging campus environment where students would presumably be more successful. Jones (2013) utilized data from 287 community college that participated in the CCSSE. It was found that the student body racial diversity had strong statistical relationship with the normative environment of a community college toward conversations with racially-diverse others and student conversations with peers who differ in terms of their personal beliefs and values. According to Jones’ (2013) findings, enrolling a more racially diverse student body helps to create an environment where students can engage in conversations with peers with different beliefs and develop a greater understanding of people from different backgrounds. Additionally, it suggests that racially diverse environments are more supportive than racially homogenous environments (Jones, 2013).

Cuellar and Johnson-Ahorlu’s (2016) and Jones’ (2013) studies show the importance of understanding the complexity of campus environment. Campus environment and culture varies by institutions. A large minority population does not guarantee that the campus environment will automatically result in positive campus experiences for all students; however, increased diversity in beliefs does allow for opportunities of engaging and learning different beliefs and values which for some students increase their sense of belonging. Perceptions of campus environment entails more than just the racial climate; it encompasses the cultures and subcultures of the students and staff (Kuh, 2009).

More recent literature acknowledges that not only do students’ perceptions vary among racial groups (Martin et al., 2017; Nakajima et al., 2012; Worthington et al., 2008) but also within racial groups (Griffin et al., 2015). Griffin et al. (2015) conducted a qualitative study that
addressed the potential range of perspectives within the Black student community. Griffin et al. (2015) interviewed 43 Black students (15 natives, 28 immigrants) enrolled in a predominantly White research institution to analyze their perspectives on diversity and campus racial climate. The research addressed the following three questions: (1) How do Black immigrant and native students perceive diversity on campus (structural diversity)?; (2) How do Black immigrants and native students describe how they perceive and experience the climate (psychological climate)?; and (3) How do Black immigrant and native students describe their interactions with students from racial and ethnic backgrounds different from their own (behavioral climate)? Participants engaged in two phases of semi-structured interviews. In terms of structural diversity, both groups agreed that there was little racial diversity on their particular campus and that creating social relationships inside of racial groups was met with difficulty at times. Some students expressed feelings of not being welcomed among peers; however, others felt very welcomed among peers. Griffin et al.’s (2015) findings reveal how structural diversity influences psychological and behavioral dimensions of climate. Low levels of representation can increase the likelihood that people of color will be subjected to stereotypes and marginalization, therefore leading to a more negative assessment of the campus climate (Griffin et al., 2015). Griffin et al. (2015) recommend that scholars and practitioners acknowledge and examine student dynamics not only across, but also within, racial groups as these understandings can facilitate better measures of campus climate and foster more effective means of supporting students as they navigate campus environments.

Additionally, Nelson-Laird and Niskode-Dossett (2010) have highlighted differences between gender groups in their study that examined the effect of interactions across difference on student perceptions of the campus environment by race/ethnic gender. Utilizing data from the
2006 National Survey of Student Engagement (NSSE), Nelson-Laird and Niskode-Dossett (2010) examined the institutional supportiveness and the supportiveness relationship of 522 colleges as perceived by 37,122 first year students and 42,285 seniors. While this study was limited in responses from members who identified as racial minorities, it was found that perception differences existed between the first-year men and women of the same racial groups. Senior participants expressed more satisfaction with supportive relationships among peers. The findings also revealed that students who rated supportive relationships high also rated institutional supportiveness high. While the study does not provide enough information to why genders may perceive the campus differently, it is important to highlight as such perceptions impact the student’s sense of belonging which ultimately impacts his/her decision to persist (Lundberg et al., 2018).

Perceptions of campus racial climate are not the only factor regarding student persistence decisions of community colleges. Studies have explored other potential factors to help explain why students within the same institution persist while others do not. Early studies were predictive in nature and highlighted several factors that could help identify at-risk students. This was in an effort to help explain the achievement gap that was being seen in colleges nationwide, regardless of institutional type. Empirical studies reveal that White students, male and female, were persisting and completing at higher rates than racial/ethnic minority students (Martin et al., 2017). Martin et al. (2017) examined racial/ethnic differences in GPA among students at a highly selective, private university. Two cohorts of students who matriculated to Duke University as part of the 2001 and 2002 incoming classes were surveyed in the summer before they enrolled at the University. The cohort consisted of 60% White students, 15% Asian students, 11% Black students, 8% Latina/o students, and 6% who identified as multiracial or
another race. The GPA of the cohorts were collected at the end of their first, second and fourth years at the institution. In the first year, GPAs for White and Asian students were about one-half of a letter grade higher than for Black students and one-quarter of a letter grade higher than for Latino students. By the fourth year, the Black-White and Latina/o-White GPA gaps had declined about one quarter and one-sixth of a letter grade, respectively. At graduation, 40% of Asian, 38% of White, 25% of multiracial, 21% of Latino and 9% of Black students received honors recognition. The Black-White and Latino-White GPA gaps were largest during the first college year and narrowed as students selected majors and settled into college life. Although there were significant gaps in achievement among the groups, it could not be explained by social involvement. According to Martin et al. (2017), Black students were less likely to be involved in fraternities or sororities and reported less socialization opportunities than White students but still experienced lower graduation and completion rates. Martin et al. (2017) suggests that institutions review policies and programs to ensure that the campus is providing resources to populations with lower completion rates.

Empirical studies on student persistence have also examined students’ participation in study skills courses (Windham et al., 2014), living-learning communities (Barbatis, 2010), and dimensions of student learning (i.e., socio-academic integration, frequency of student-faculty contact, content mastery, and self-efficacy; Wolniak et al., 2012). In these studies, positive experiences within the living-learning community, interactions with faculty within the study skills course, and high levels of socio-academic and student-faculty contact contributed to positive student outcomes (i.e., high persistence and completion rates). Each study highlights a dynamic of the result of positive campus climate perceptions and the impact it has on a student’s
sense of belonging. Such studies have been beneficial in understanding what makes campus climate different than other persistence factors.

**Summary of the Literature and How It Relates to the Proposed Study**

Understanding why some students at community colleges persist and others do not is very complex. The student population within the community college sector has a larger group of students from identified at-risk populations (e.g., racial/ethnic minorities, academically underprepared students, non-traditional students and students from lower socio-economic statuses) (Cohen et al., 2014). Discussion of student persistence and completion rates are often restricted to predictive studies (Fike & Fike, 2008; Nakajima et al., 2012) in which investigators explore variables that help identify students who are least likely to persist. Understanding how identity provides the lens of how students experience campus will help guide practitioners in ensuring that institutions are implementing practices to support the diverse populations that they are attracting.

This study provided an inclusive approach and did not limit participation based upon race/ethnicity or gender. Additionally, this study utilized a different theoretical lens to view student persistence and sense of belonging than previous studies (Deil-Amen, 2011; Martin et al., 2017; Porchea et al., 2010; Tinto, 1975). This allowed the researcher to identify experiences or interactions that were perceived similarly across race and gender lines. Acknowledging differences are extremely important; however, it is also important to shed light on current initiatives, events, or interactions that can create positive exchanges for all students.
CHAPTER III

METHODOLOGY

The purpose of this cross-sectional correlation quantitative study was to determine if campus perceptions and sense of belonging impact persistence decisions for students at a rural community college in the southeastern part of the U.S. The study used the CECE Survey for Community Colleges (Museus et al., 2017). The current study contributes to the literature by advancing knowledge about how campus environments and sense of belonging impact persistence decisions among community college students attending a rural community college. Chapter III discusses the methods and procedures used to facilitate the study. This chapter includes a description of the research design, research questions, research site, population and sampling procedures, instruments, data collection procedures and data analysis procedures.

Research Design

This study employed a quantitative cross-sectional correlational research design with two independent variables (students’ perceptions of campus environment and sense of belonging) and one dependent variable (students’ decisions to persist). Correlational studies investigate the possibility of relationships between two variables and describe the degree to which the variables are related (Fraenkel, Wallen & Hyun, 2016). A major purpose of correlational research is to clarify the understanding of important phenomenon by identifying relationships among variables (Fraenkel et al., 2016). The main purpose of the study was to investigate how the students’ perceptions of campus environment and sense of belonging are related to their decisions to
persist. Additionally, the study investigated whether differences existed between and within racial/ethnic groups, gender groups, and residential and commuter students.

A survey was used to collect necessary data. The major purpose of a survey is to collect data to determine various and specific characteristics of a group (Fraenkel et al., 2016). A cross-sectional survey is a survey that is collected at one point in time (Fraenkel et al., 2016). The researcher believed this was the most appropriate method to collect data as the target sample size included 6,054 students. The desired sample size was calculated using G*Power 3.1 (Faul, Erdfelder, Lang & Buchner, 2007), a free stand-alone power analysis program for many statistical tests used in the social and behavioral sciences (Faul, Erdfelder, Buchner & Lang, 2009). The program determined that a sample size of 134 participants was needed to determine whether results were significant utilizing a 95% confidence interval and a moderate effect size ($d=0.3$).

**Research Questions**

The following research questions guided this study:

1. What effect do student perceptions of campus environment have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students in a rural community college?

2. What effect do student perceptions of sense of belonging have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students in a rural community college?

3. Are there significant differences among students’ perceptions of campus environment and sense of belonging based on racial/ethnic and gender identities?
4. Are there significant differences among students’ perceptions of campus environment and sense of belonging based on residential or commuter status?

Research Site

This study utilized participants from one community college within the southeastern part of the U.S. According to the current Carnegie Classification (The Carnegie Classifications of Institutions of Higher Education, 2018), the study site is a large, 2-year institution with a medium full-time enrollment profile and degree offerings for associate degrees, vocational and technical certificates, and transfer options. This specific institution has six campus locations with two of its campuses containing residential facilities. Campus Branch A is considered the college’s main campus and is a rural residential campus. Enrollment for this campus included approximately 6,000 students with approximately 1,200 residential students. Campus Branch A also hosts all but one of the college’s athletic programs. Campus Branch B is a rural residential campus that enrolled approximately 1,200 students. Approximately 400 students reside on-campus. Campus Branch B has an Historically Black Colleges and Universities (HBCU) designation and offers a bus/shuttle option for commuter students. Campus Branch B also has a Student Support Services program on its campus. This program offers additional resources such as peer tutoring and workshops to first-generation, low-income or disadvantaged college students. Campus Branch C is a suburban commuter campus that enrolled approximately 3,000 commuter students. Campus Branch C offers more courses in career and technical technology than the other campus locations. Campus Branch D is a suburban commuter campus that enrolled approximately 1,400 commuter students. Campus Branch D also hosts an early college high school on its campus. Campus Branch E is an urban commuter campus that enrolled approximately 1,200 commuter students. Campus Branch E has an office for a minority mentorship program for men on its
campus. Campus Branch F is an urban commuter campus that enrolls approximately 650 students. Campus Branch F hosts the district’s health and allied health programs. The other five locations offer course offerings in academic and career and technical programs. Course offerings in academic programs are consistent across campuses; however, career and technical programs may vary. For example, Campus Branch A offers the college’s only aviation program, and cosmetology courses are only offered on two campuses: Campus Branch B and D.

The institution has approximately 61% of its students enrolled in at least one traditional-style course. Approximately 18% of its student population lives on campus. Students living on campus are required to have at least 75% of their classes as traditional-style courses. The overall student population is predominantly female students (60%) with 40% being male students. The institution currently reports race/ethnicity in three categories: White, Black and Other. The institution’s largest student population is Black students (50%), followed by White students (33%) and then those students who identify as Other (17%).

One of the reasons this site was chosen by the researcher was due to the fact that the researcher is currently employed by the institution. Additionally, the researcher believed this site would be an ideal study site because of its campus demographics and the presence of the residence halls. Studies regarding residential students are typically not included in studies about community colleges since approximately 28% of community colleges offer on-campus student housing (American Association of Community Colleges, 2019). While the sole focus of this study was not on residential students, the fourth research question asked, *Are there significant differences among students’ perceptions of campus environment and sense of belonging based on residential or commuter status?*
Research Participants

Criterion for participation included students enrolled in traditional-style courses, either part-time or full-time, during the fall 2019 semester. Students who were considered online students were excluded from the study as the exploration of campus environment requires that the student has a physical interaction with individuals or groups within the campus. After observing enrollment numbers of the institution, the researcher’s sample size included 6,054 students within the community college’s district.

Instrumentation

The CECE Survey for Community Colleges (Museus et al., 2017) is a 42-item survey that asks students various questions to collect data on sociodemographic characteristics; perceptions of opportunities to engage in cultural learning opportunities; availability of resources, trustworthiness and support of staff and students; and their sense of belonging. Other questions asked the student to select what degree he/she wanted to obtain before attending college, what degree he/she wants to complete since enrolling, and whether he/she intends to complete the degree at the specific institution. Questions asked students to identify what community means to them as students were answering the question. The survey is able to be administered electronically.

The content validity of the CECE Survey (Museus et al., 2017) was examined by nine subject master experts in the areas of quantitative methods, campus diversity, and college student success. A second panel of five subject matter experts also examined each item to see how essential the item was in measuring the established constructs. The survey was then administered to 499 students across three campuses to conduct factor analyses and reliability analyses. It was concluded that all nine constructs had high construct validity with alpha scores between .81 and
The final results suggested that the content and construct validity of the CECE survey (Museus et al., 2017) is sufficient for it to be used in future analyses (Museus et al., 2017). Permission to use the survey was granted via email by the creator of the survey and model. The only modification that was made to the survey included the addition of the question that allowed for respondents to select which campus they attended. Campus environment includes a physical component which can be used to delve deeper into potential significant results or findings.

**Data Collection Procedures**

After receiving approval from the dissertation committee, the Mississippi State University Institutional Review Board (see Appendix A), and the research study site, the researcher worked with the college’s Institutional Research office to electronically administer the survey to eligible students. The study occurred during the fall 2019 semester as it provided a greater opportunity to receive more responses. Enrollment reports from the institution showed that fall enrollment is higher than spring enrollment. The researcher worked with the Institutional Research office to send an email that explained the purpose of the survey and contained the consent letter and survey link to students via their student email address.

The survey was administered through Survey Monkey®. The consent letter explained that the student received no direct benefit from the study and that participation was completely voluntary. The researcher collected survey responses from mid-September to mid-October for a period of four weeks. Students received an email from the college’s Institutional Research office with the Survey Monkey® link, consent letter and survey explanation. The researcher aimed to receive at least 134 completed survey responses from students.
Data Analysis Procedures

Two types of statistical analyses, descriptive and inferential, were performed during the data analysis phase. Descriptive statistics were used to describe the basic features of the research. Inferential statistics were performed to examine the relationships within the data.

Correlation analysis was conducted to determine the relationship between campus environment perceptions and persistence decisions. Correlation analysis was also conducted to determine the relationship between sense of belonging and persistence decisions. An ANOVA was utilized to examine differences in perceptions of campus environment and sense of belonging between and within racial/ethnic groups and gender groups. Additionally, a t-test was utilized to examine differences between residential and commuter students.

Correlation is a “statistical technique that is used to measure and describe the relationship between two variables” (Gravetter & Wallnau, 2017, p. 487). Research question one examined the relationship between perceptions of campus environment and persistence decisions of rural community college students. Research question two examined the relationship between sense of belonging and persistence decisions of rural community college students. Both variables, campus environment perceptions and sense of belonging, are believed to naturally exist within the rural community college environment and required no manipulation or control of these two variables, thus making a correlation test the most appropriate for the current research focus and questions (Gravetter & Wallnau, 2017). The researcher calculated Pearson $r$ to obtain the correlations of perceptions of campus environment and persistence decisions and sense of belonging and persistence decisions.

The researcher conducted an ANOVA to answer research question three which explores the differences among perceptions of campus environment and sense of belonging based on
racial/ethnic and gender identity groups. An analysis of variance (ANOVA) is a hypothesis-testing procedure that is used to evaluate mean differences between two or more populations (Gravetter & Wallnau, 2017). This statistical method was appropriate as the researcher examined whether differences of campus environment perceptions and sense of belonging existed between and within various racial/ethnic groups and gender groups. This method allowed the researcher to examine the differences by race/ethnicity and gender as well as examine differences within racial and gender identity groups.

The researcher conducted a $t$-test to examine the differences among perceptions of campus environment and sense of belonging based on residential status. According to Gravetter and Wallnau (2017), the $t$ statistic is used to test hypotheses about an unknown population mean when the value of the variance is not known. An alpha level of .05 was used. Had the $t$ statistic been statistically significant, the researcher would have used Cohen’s $d$ to determine effect size. A measure of effect size provides a measurement of the treatment effect, independent of the size of the sample being used (Gravetter & Wallnau, 2017). Cohen’s $d$ allows for the mean difference being measured to be standardized in terms of standard deviation (Gravetter & Wallnau, 2017). The researcher utilized the suggested criteria for evaluating effect size as shown in Table 2.

Table 2

*Suggested Criteria for Evaluation the Size of a Treatment Effect (Gravetter & Wallnau, 2017)*

<table>
<thead>
<tr>
<th>Magnitude of $d$</th>
<th>Evaluation of Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>$d=0.2$</td>
<td>Small effect</td>
</tr>
<tr>
<td>$d=0.5$</td>
<td>Medium effect</td>
</tr>
<tr>
<td>$d=0.8$</td>
<td>Large effect</td>
</tr>
</tbody>
</table>
Summary of Method

The proposed study was conducted during the fall 2019 semester at a rural community college in the southeastern part of the U.S. With the assistance of the college’s Institutional Research office, the survey was administered electronically via Survey Monkey®. The researcher worked with the college’s Institutional Research staff to send an email regarding the survey to the target population. Correlation analyses, t-test, and ANOVA were conducted once completed responses exceeded the targeted response numbers of 134.
CHAPTER IV
RESULTS AND FINDINGS

Chapter IV presents the results of the statistical analysis of the data of this study. The purpose of this cross-sectional, correlational quantitative study was to determine if a student’s perceptions of campus environment and sense of belonging influence persistence decisions for students at a rural community college in the southeastern part of the U.S. The study was guided by the following four research questions:

1. What effect do student perceptions of campus environment have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students in a rural community college?

2. What effect do student perceptions of sense of belonging have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students in a rural community college?

3. Are there significant differences among students’ perceptions of campus environment and sense of belonging based on racial/ethnic and gender identities?

4. Are there significant differences among students’ perceptions of campus environment and sense of belonging based on residential or commuter status?

The study’s data were gathered through the use of online survey titled CECE Survey for Community Colleges (Museus et al, 2017). The survey allowed participants to self-report demographic information including race/ethnicity, gender identity, age, and parental education.
attainment levels. Questions regarding campus environments utilized a Likert scale that allowed participants to select to what degree they agreed or disagreed with campus interactions with faculty, staff and peers. Other questions asked participants to what degree they felt valued within the campus community. In terms of persistence, participants were asked, “How likely are you to receive an associate’s degree or certificate from this institution?”

After approval from the Institutional Review Board and the college, a survey was administered to 6,054 students within the community college system. Participants had to be enrolled in at least one traditional course within the college during the fall 2019 semester. The study used correlation analysis to examine the relationship between campus environment perceptions and persistence decisions. Correlation analysis was also used to examine the relationship between sense of belonging and persistence decisions. An ANOVA was conducted to examine differences in perceptions of campus environment and sense of belonging among racial and ethnic groups and gender identity groups. Lastly, a t-test was conducted to examine whether differences of campus environment perceptions and sense of belonging existed between residential and commuter students. The Statistical Package for Social Sciences (SPSS), version 26.2, was used to conduct the analysis of the data collected.

The survey was administered online to 6,054 students through the institution’s Institutional Research Office. The Institutional Research Office issued the email and survey request once to the students’ school email address. A total of 244 survey responses were collected during the fall 2019 semester. Respondents were from five of the six campus locations. Campus F did not have any students to participate in the current study. Ten surveys were removed from the sample due to incomplete answers, thus leaving a sample size of 234 respondents. Participants had to be currently enrolled in at least one traditional course within the
institution during the time of the survey. The sample is representative of the institution’s student population. The institution had multiple campus locations. Table 3 details the frequencies and percentages of each campus location as well as the respondents’ demographic information.

While the survey was administered to all campus locations, one campus branch had no responses. Of the other branches, 10% of participants came from Campus Branch A; 36% from Campus Branch B; 14% from Campus Branch C; 36% from Campus Branch D; and 4% from Campus Branch E. Of the participants, 59% identified as African American/Black; 33% identified as White; 4% as Latina/Latino/Latinx; 2% as multiracial; and less than 1% preferred not to disclose. In terms of gender, 26% identified as Man, 68% identified as Woman; 4% identified as Questioning/Unsure; less than 1% identified as Genderqueer/Gender-fluid; less than 1% elected not to self-disclose. In terms of age, 91% of the participants were between the ages 18-35 years old; 4% were 36-40 years old; 2% were 41-45 years old; 2% 46-50 years old; and 1% were over 50 years old. In terms of enrollment, 16% were first-time students and 84% had previously completed at least one credit hour at the institution.

Table 3

*Frequencies and Percentages of Survey Responses*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td><strong>Campus Location</strong></td>
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<td></td>
</tr>
<tr>
<td>Campus Branch A</td>
<td>23</td>
<td>10%</td>
</tr>
<tr>
<td>Campus Branch B</td>
<td>84</td>
<td>36%</td>
</tr>
<tr>
<td>Campus Branch C</td>
<td>33</td>
<td>14%</td>
</tr>
<tr>
<td>Campus Branch D</td>
<td>84</td>
<td>36%</td>
</tr>
<tr>
<td>Campus Branch E</td>
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<td>4%</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
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<td></td>
</tr>
<tr>
<td>Alaskan Native/American Indian/ Native American</td>
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<td>&gt;1%</td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Black/African American</td>
<td>138</td>
<td>59%</td>
</tr>
<tr>
<td>Latina/Latino/Latinx</td>
<td>9</td>
<td>4%</td>
</tr>
<tr>
<td>Middle Eastern/Northern African</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
</tbody>
</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiracial</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>2</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Prefer Not to Disclose</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>White</td>
<td>77</td>
<td>33%</td>
</tr>
<tr>
<td>Gender</td>
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<td></td>
</tr>
<tr>
<td>Agender</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Androgyne</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Demigender</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Man</td>
<td>60</td>
<td>26%</td>
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<tr>
<td>Questioning/Unsure</td>
<td>10</td>
<td>4%</td>
</tr>
<tr>
<td>Woman</td>
<td>159</td>
<td>68%</td>
</tr>
<tr>
<td>Prefer not to Disclose</td>
<td>1</td>
<td>&gt;1%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 to 35 years old</td>
<td>212</td>
<td>91%</td>
</tr>
<tr>
<td>36-40 years old</td>
<td>9</td>
<td>4%</td>
</tr>
<tr>
<td>41-45 years old</td>
<td>5</td>
<td>2%</td>
</tr>
<tr>
<td>46-50 years old</td>
<td>5</td>
<td>2%</td>
</tr>
<tr>
<td>Over 50 years old</td>
<td>3</td>
<td>1%</td>
</tr>
</tbody>
</table>

The remainder of this chapter will present the statistical analysis and results of each research question. It will conclude with a brief overview of the findings.

**Examination of Research Question One**

Research question 1 asked: *What effect do student perceptions of campus environment have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017)*? Respondents were asked to select the number that best describes their feelings about various campus interactions and experiences. Participants responded using a 5-point Likert scale. The Likert scale had various responses depending on the question asked. For example, one survey question asked the respondents, “To what extent do you agree or disagree with the following statements?” In this series of questions, respondents could choose from the following options: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree or Disagree, (4) Agree or (5)
Strongly Agree. However, another question asked the respondents, “Compared to when you first entered this institution, how would you describe your current ability to do the following?” Statements in this question included statements such as “understand cultures different from your own,” “work effectively on a team,” and “learn as much as possible during college.” In these cases, respondents could select the following Likert scale options: (1) Much Worse, (2) Worse, (3) About the Same, (4) Better, or (5) Much Better. Lastly respondents were asked to rate their satisfaction with their overall college experiences using a 5-point Likert scale where response options included (1) Very Dissatisfied, (2) Dissatisfied, (3) Neither Satisfied or Dissatisfied, (4) Satisfied, or (5) Very Satisfied. Survey items 2, 4, and 6-8 were used to compute the campus perceptions variable. The Likert-scale responses were converted to numerical values from 1 to 5 with 1 representing Strongly Disagree and 5 representing Strongly Agree. The campus perceptions variable was then computed using SPSS by computing the mean for all survey item responses associated with the variable.

Table 4 displays the mean scores and percentages for survey item 2. This survey item consisted of nine questions that focused on how the student felt about the support he/she received from educators and staff. Additionally, it sought to find whether a student felt a connection to the institution and community. Respondents overall had a very positive perception of the staff and possessed a connection to the institution ($M=3.76$). However, only 51% of the respondents felt as though people at the institution regularly checked in with them to see if they needed support. This percentage of students is lower than the percentages of other questions listed in this item. For example, 76% of respondents either agreed or strongly agreed with the statement stating that they knew a person that could help them if they should need support. Additionally, 62% felt as
though they are part of the institutional community, 64% felt as though they belong, and 59% felt a strong connection to the institution.

Table 4

_Percentages of Participants’ Responses to Survey Item #2_

<table>
<thead>
<tr>
<th>People at this institution often send me important information about new learning opportunities.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>4%</td>
<td>9%</td>
<td>14%</td>
<td>48%</td>
<td>25%</td>
<td>3.83</td>
<td></td>
</tr>
</tbody>
</table>

People at this institution often send me important information about supports that are available.

<table>
<thead>
<tr>
<th>People at this institution check in with me regularly to see if I need support.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>8%</td>
<td>16%</td>
<td>40%</td>
<td>31%</td>
<td>3.82</td>
<td></td>
</tr>
</tbody>
</table>

If I need support, I know a person at this institution who I trust to give me that support.

<table>
<thead>
<tr>
<th>If I have a problem, I know a person at this institution who I trust to help me solve that problem.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>8%</td>
<td>11%</td>
<td>38%</td>
<td>38%</td>
<td>3.94</td>
<td></td>
</tr>
</tbody>
</table>

If I need information, I know a person at this institution who I trust to give me the information I need.
Table 4 (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel like I am part of the community at the institution.</td>
<td>7%</td>
<td>7%</td>
<td>24%</td>
<td>34%</td>
<td>28%</td>
<td>3.69</td>
</tr>
<tr>
<td>I feel like I belong at this institution.</td>
<td>8%</td>
<td>4%</td>
<td>24%</td>
<td>38%</td>
<td>26%</td>
<td>3.70</td>
</tr>
<tr>
<td>I feel a strong connection to the community at this institution.</td>
<td>8%</td>
<td>8%</td>
<td>25%</td>
<td>34%</td>
<td>25%</td>
<td>3.59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>3.76</strong></td>
</tr>
</tbody>
</table>

Table 5 presents the response percentages of survey item 4. This item consisted of nine statements that focused on whether the student perceived the institution provided opportunities to discuss social issues, whether educators were caring individuals, and whether there was a team concept of success at the institution. Overall, the data revealed that students had a positive experience as measured by this item ($M=3.77$). Out of 234 respondents, over 40% of respondents agreed with every statement.

Table 5

*Percentages of Participants’ Responses to Survey Item #4*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>At this institution, there are enough opportunities to discuss important social issues with people from different cultural backgrounds.</td>
<td>6%</td>
<td>10%</td>
<td>25%</td>
<td>44%</td>
<td>15%</td>
<td>3.54</td>
</tr>
</tbody>
</table>
Table 5 (continued)

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>At this institution, there are enough opportunities to discuss important political issues with people from different cultural backgrounds.</td>
<td>8%</td>
<td>10%</td>
<td>29%</td>
<td>40%</td>
<td>13%</td>
<td>3.41</td>
</tr>
<tr>
<td>At this institution, there are enough opportunities to discuss important diversity-related issues with people from different cultural backgrounds.</td>
<td>8%</td>
<td>8%</td>
<td>27%</td>
<td>41%</td>
<td>16%</td>
<td>3.50</td>
</tr>
<tr>
<td>In general, people at this institution help each other succeed.</td>
<td>5%</td>
<td>7%</td>
<td>19%</td>
<td>44%</td>
<td>25%</td>
<td>3.78</td>
</tr>
<tr>
<td>In general, people at this institution support each other.</td>
<td>5%</td>
<td>5%</td>
<td>19%</td>
<td>46%</td>
<td>25%</td>
<td>3.81</td>
</tr>
<tr>
<td>In general, people at this institution work together toward common goals.</td>
<td>5%</td>
<td>4%</td>
<td>18%</td>
<td>48%</td>
<td>25%</td>
<td>3.87</td>
</tr>
<tr>
<td>In general, educators care about students at this institution.</td>
<td>5%</td>
<td>3%</td>
<td>13%</td>
<td>42%</td>
<td>37%</td>
<td>4.04</td>
</tr>
<tr>
<td>In general, educators at this institution are committed to my success.</td>
<td>4%</td>
<td>4%</td>
<td>16%</td>
<td>44%</td>
<td>32%</td>
<td>3.97</td>
</tr>
<tr>
<td>In general, I view educators at this institution as caring human beings.</td>
<td>4%</td>
<td>5%</td>
<td>14%</td>
<td>41%</td>
<td>36%</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>3.77</strong></td>
</tr>
</tbody>
</table>

Table 6 presents the percentages and means for survey item 6. This item consisted of 19 statements that asked the respondent to assess his/her ability to accomplish various tasks, such as analyzing problems, working on a team, or communicating with people from cultural
communities different than their own since enrolling in the institution. Overall respondents experienced a positive view of their abilities to complete tasks as compared to when they first entered the institution ($M=3.86$). Over 60% of respondents indicated that he/she did better or much better with each task. Approximately 78% indicated that they feel better or much better about their ability to be successful in college.
### Table 6

**Percentages of Participants’ Responses to Survey Item #6**

<table>
<thead>
<tr>
<th>Task</th>
<th>Much Worse</th>
<th>Worse</th>
<th>About the Same</th>
<th>Better</th>
<th>Much Better</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyze complex problems</td>
<td>2%</td>
<td>3%</td>
<td>35%</td>
<td>38%</td>
<td>22%</td>
<td>3.75</td>
</tr>
<tr>
<td>Generate your own solutions to complex problems</td>
<td>1%</td>
<td>2%</td>
<td>35%</td>
<td>40%</td>
<td>22%</td>
<td>3.79</td>
</tr>
<tr>
<td>Be an effective leader</td>
<td>1%</td>
<td>2%</td>
<td>31%</td>
<td>36%</td>
<td>30%</td>
<td>3.93</td>
</tr>
<tr>
<td>Write effectively</td>
<td>0%</td>
<td>4%</td>
<td>32%</td>
<td>37%</td>
<td>27%</td>
<td>3.87</td>
</tr>
<tr>
<td>Verbally communicate your ideas effectively</td>
<td>0%</td>
<td>2%</td>
<td>32%</td>
<td>37%</td>
<td>29%</td>
<td>3.91</td>
</tr>
<tr>
<td>Learn on your own</td>
<td>1%</td>
<td>4%</td>
<td>28%</td>
<td>37%</td>
<td>30%</td>
<td>3.91</td>
</tr>
<tr>
<td>Work productively on a team</td>
<td>2%</td>
<td>0%</td>
<td>35%</td>
<td>39%</td>
<td>24%</td>
<td>3.84</td>
</tr>
<tr>
<td>Be successful in college</td>
<td>1%</td>
<td>3%</td>
<td>19%</td>
<td>37%</td>
<td>41%</td>
<td>4.12</td>
</tr>
<tr>
<td>Perform well on a job</td>
<td>2%</td>
<td>1%</td>
<td>33%</td>
<td>32%</td>
<td>32%</td>
<td>3.91</td>
</tr>
<tr>
<td>Understand your different career options</td>
<td>2%</td>
<td>3%</td>
<td>25%</td>
<td>37%</td>
<td>33%</td>
<td>3.97</td>
</tr>
<tr>
<td>Understand viewpoints that are different than yours</td>
<td>1%</td>
<td>1%</td>
<td>30%</td>
<td>37%</td>
<td>31%</td>
<td>3.97</td>
</tr>
<tr>
<td>Understand cultures different from your own</td>
<td>1%</td>
<td>2%</td>
<td>35%</td>
<td>34%</td>
<td>28%</td>
<td>3.97</td>
</tr>
<tr>
<td>Appreciate cultures different from your own</td>
<td>1%</td>
<td>1%</td>
<td>34%</td>
<td>31%</td>
<td>33%</td>
<td>3.95</td>
</tr>
<tr>
<td>Accept people from cultures different from your own</td>
<td>1%</td>
<td>1%</td>
<td>31%</td>
<td>35%</td>
<td>32%</td>
<td>3.96</td>
</tr>
<tr>
<td>Communicate with people from communities different than your own</td>
<td>1%</td>
<td>1%</td>
<td>33%</td>
<td>36%</td>
<td>29%</td>
<td>3.90</td>
</tr>
<tr>
<td>Work effectively with people from communities different than your own</td>
<td>1%</td>
<td>2%</td>
<td>33%</td>
<td>35%</td>
<td>29%</td>
<td>3.87</td>
</tr>
<tr>
<td>Work effectively with people from communities different than your own</td>
<td>1%</td>
<td>3%</td>
<td>34%</td>
<td>34%</td>
<td>28%</td>
<td>3.86</td>
</tr>
<tr>
<td>Have a positive impact on your own cultural communities.</td>
<td>1%</td>
<td>2%</td>
<td>34%</td>
<td>32%</td>
<td>31%</td>
<td>3.02</td>
</tr>
<tr>
<td>Have a positive impact on larger society</td>
<td>1%</td>
<td>3%</td>
<td>31%</td>
<td>34%</td>
<td>31%</td>
<td>3.90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.86</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7 presents the percentages and mean score for survey item 7. This item consisted of five statements that asked the respondent to indicate his/her ability to complete certain tasks as
compared to when he/she first entered into the institution. Overall respondents indicated a positive perception in their ability to complete these tasks \( (M=4.00) \). Over 60% of respondents indicated that they felt better or much better about the tasks since enrolling in the institution.

Table 7

*Percentages of Participants’ Responses to Survey Item #7*

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Much Worse</th>
<th>Worse</th>
<th>About the Same</th>
<th>Better</th>
<th>Much Better</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work hard in school</td>
<td>3%</td>
<td>5%</td>
<td>22%</td>
<td>29%</td>
<td>41%</td>
<td>4.02</td>
</tr>
<tr>
<td>Get good grades</td>
<td>3%</td>
<td>5%</td>
<td>23%</td>
<td>30%</td>
<td>39%</td>
<td>3.99</td>
</tr>
<tr>
<td>Learn as much as possible during college</td>
<td>2%</td>
<td>5%</td>
<td>20%</td>
<td>33%</td>
<td>40%</td>
<td>4.06</td>
</tr>
<tr>
<td>Have a positive impact in your own community</td>
<td>1%</td>
<td>3%</td>
<td>30%</td>
<td>30%</td>
<td>36%</td>
<td>3.98</td>
</tr>
<tr>
<td>Have a positive impact on larger society</td>
<td>3%</td>
<td>2%</td>
<td>28%</td>
<td>31%</td>
<td>36%</td>
<td>3.96</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4%</strong></td>
<td><strong>5%</strong></td>
<td><strong>22%</strong></td>
<td><strong>29%</strong></td>
<td><strong>41%</strong></td>
<td><strong>4.00</strong></td>
</tr>
</tbody>
</table>

Table 8 presents the percentages and responses to survey item 8 which asked, “How satisfied are you with your college experience at this institution?” Out of 234 responses, 32% \( (n=75) \) were very satisfied with their overall college experience; 38% \( (n=89) \) were satisfied with their college experience; 17% \( (n=40) \) were neither satisfied nor dissatisfied with their college experience; 8% \( (n=19) \) were dissatisfied with their overall college experience; and 5% \( (n=11) \) were very dissatisfied with their overall college experience.
Table 8

Percentages of Participants’ Responses to Survey Item #8

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Satisfied</td>
<td>75</td>
</tr>
<tr>
<td>Satisfied</td>
<td>89</td>
</tr>
<tr>
<td>Neither Satisfied/Dissatisfied</td>
<td>40</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>19</td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>

Persistence Decisions

Survey items 13 through 16 asked respondents to indicate how likely or unlikely it is that they would complete a college certificate, associate’s or equivalent at this institution or any institution. Table 9 presents the percentages of responses for each of these items. Out of 234 responses, 60% said that it was very likely they would complete a college certificate and 60% an associate’s degree at this institution; 65% said that it was very likely they would complete a college certificate and 45% an associate’s degree at any institution.
Table 9

Percentages of Participants’ Responses to Survey Items 13-16

<table>
<thead>
<tr>
<th></th>
<th>Very Unlikely</th>
<th>Unlikely</th>
<th>Likely</th>
<th>Very Likely</th>
<th>Already completed a college certificate</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>How likely or unlikely is it that you will complete a college certificate at this institution?</td>
<td>6%</td>
<td>8%</td>
<td>18%</td>
<td>60%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>How likely or unlikely is it that you will complete a college certificate or equivalent at any institution?</td>
<td>4%</td>
<td>4%</td>
<td>20%</td>
<td>65%</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>How likely or unlikely is it that you will complete an associate’s degree (AA) or equivalent at this institution?</td>
<td>5%</td>
<td>6%</td>
<td>19%</td>
<td>60%</td>
<td>2%</td>
<td>8%</td>
</tr>
<tr>
<td>How likely or unlikely is it that you will complete an associate’s degree (AA) or equivalent at any institution?</td>
<td>6%</td>
<td>12%</td>
<td>23%</td>
<td>45%</td>
<td>3%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Table 10 displays the overall and campus perceptions mean scores, standard deviation, and minimum and maximum scores by campus locations. Campus E mean score ($n=10, M=4.04, SD=0.66$) was slightly higher than the overall campus perception mean score ($N=234, M=3.85, SD=0.71$).

The overall results showed a minimum rating of 1.67 and a maximum rating of 3.85. The results of the correlation analysis ($N=234, M=3.85, SD=0.71$) revealed a positive small correlation ($r=0.18$) between campus environment perceptions and persistence decisions for
The results suggest that a more positive campus perception contributes to a student’s decision to persist within this community college.

### Table 10

**Campus Perception Sample Size, Mean, Standard Deviation and Range by Campus Location**

<table>
<thead>
<tr>
<th>Campus Location</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Branch A</td>
<td>23</td>
<td>3.63</td>
<td>0.61</td>
<td>2.23</td>
<td>4.67</td>
</tr>
<tr>
<td>Campus Branch B</td>
<td>84</td>
<td>3.72</td>
<td>0.61</td>
<td>2.10</td>
<td>4.94</td>
</tr>
<tr>
<td>Campus Branch C</td>
<td>33</td>
<td>3.51</td>
<td>0.59</td>
<td>2.17</td>
<td>4.60</td>
</tr>
<tr>
<td>Campus Branch D</td>
<td>84</td>
<td>3.60</td>
<td>0.64</td>
<td>1.63</td>
<td>4.92</td>
</tr>
<tr>
<td>Campus Branch E</td>
<td>10</td>
<td>4.04</td>
<td>0.66</td>
<td>3.15</td>
<td>4.98</td>
</tr>
<tr>
<td>All Locations</td>
<td>234</td>
<td>3.85</td>
<td>0.71</td>
<td>1.67</td>
<td>3.85</td>
</tr>
</tbody>
</table>

### Examination of Research Question Two

Research question 2 asked: *What effect does student perceptions of sense of belonging have on persistence as measured by the CECE Survey for Community Colleges (Museus et al., 2017) for community college students in a rural community college?* Respondents were asked to select the number that best describes their feelings about various college experiences and relationships. Participants responded using a 5-point Likert scale. The Likert scale had various responses depending on the question asked. For example, one survey question asked the respondents, “To what extent do you agree or disagree with the following statements?” Statements in the section included statements such as, “It is easy to find people at the institution with similar backgrounds as me.” In this series of questions, respondents could choose from the following options: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree or Disagree, (4) Agree or (5) Strongly Agree. However, another question asked the respondents, “When you first came to this institution, how often did you experience the following?” Statements in this question
included statements such as “difficulty making friends” or “feeling isolated.” In these cases, respondents could select the following Likert scale options: (5) Never, (4) Rarely, (3) Sometimes, (2) Often, or (1) Always. The responses were converted to numerical values of 1 (Always) to 5 (Never). Values were inverted for these questions due to the fact that an Always response indicated a more negative experience and a Never response indicated that the student did not struggle with this specific task. The sense of belonging variable was then computed using SPSS and a mean score was calculated from the series of related questions or statements.

Table 11 displays the percentages of participants’ responses from survey item 3. Survey item 3 consisted of four statements in which participants were asked to select the frequency to which they experienced the ease or difficulty of certain tasks. Most statements addressed issues with making friends, finding individuals who understand his/her struggles, or maintain relationships while at the institution. Overall, respondents indicated a positive experience ($M=3.74$). Even with positive mean scores, 42% of student indicated that they sometimes (21%), often (12%), or always (9%) experience difficulty making friends. Additionally, 42% also experience feelings of isolation sometime (22%), often (9%), or always (11%).

Table 11

*Percentages of Participants’ Responses to Survey Item #3*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty making friends</td>
<td>34%</td>
<td>24%</td>
<td>21%</td>
<td>12%</td>
<td>9%</td>
<td>3.65</td>
</tr>
<tr>
<td>Difficulty maintaining strong ties with pre-college friends</td>
<td>33%</td>
<td>20%</td>
<td>26%</td>
<td>13%</td>
<td>8%</td>
<td>3.56</td>
</tr>
<tr>
<td>Difficulty maintaining strong ties with family</td>
<td>56%</td>
<td>17%</td>
<td>13%</td>
<td>7%</td>
<td>6%</td>
<td>4.08</td>
</tr>
<tr>
<td>Feeling isolated</td>
<td>42%</td>
<td>16%</td>
<td>22%</td>
<td>9%</td>
<td>11%</td>
<td>3.69</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>3.74</strong></td>
</tr>
</tbody>
</table>
Table 12 displays the percentages and mean scores for survey item 5. Survey item 5 consisted of five statements regarding the ability to find and interact with people who understand their cultural backgrounds or have similar cultural backgrounds as them. Overall, respondents indicated a positive experience ($M=3.48$). Fifty-eight percent of the respondents agreed or strongly agreed that it is easy to find people at the institutions with similar backgrounds as them and 58% agreed or strongly agreed that it was easy to find people with similar backgrounds as them.

Table 12

*Percentages of Participants’ Responses to Survey Item #5*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is easy to find people at this institution with similar backgrounds as me.</td>
<td>5%</td>
<td>10%</td>
<td>27%</td>
<td>42%</td>
<td>16%</td>
<td>3.52</td>
</tr>
<tr>
<td>I frequently interact with people from similar backgrounds as me at this institution.</td>
<td>5%</td>
<td>15%</td>
<td>25%</td>
<td>40%</td>
<td>15%</td>
<td>3.43</td>
</tr>
<tr>
<td>It is easy to find people at this institution who understand me.</td>
<td>8%</td>
<td>12%</td>
<td>22%</td>
<td>43%</td>
<td>15%</td>
<td>3.46</td>
</tr>
<tr>
<td>It is easy to find people at this institution who understands my struggle.</td>
<td>8%</td>
<td>12%</td>
<td>25%</td>
<td>37%</td>
<td>18%</td>
<td>3.44</td>
</tr>
<tr>
<td>People at this institution are generally willing to take time to understand my experiences.</td>
<td>8%</td>
<td>10%</td>
<td>23%</td>
<td>41%</td>
<td>18%</td>
<td>3.53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>3.48</strong></td>
</tr>
</tbody>
</table>
Table 13 displays the percentages and mean scores of the participants’ responses to survey item 9. This survey item consisted of 10 statements that focus on capturing the participant’s perceptions of how his/her cultural community is engaged, understood, and acknowledged by the institution. The participants were informed that the term cultural community could refer to any aspect of their identity (e.g., gender, racial/ethnic, sexual orientation, or religion). Overall, the respondents reported an overall positive perception of how their community is engaged, acknowledged, and understood by the institution ($M=3.61$). However, this is the one item where under 60% of participants agreed or strongly agreed with each statement. Additionally, there appears to be a larger percentage of students (28-36%) who neither disagree or agree with the statements.
Table 13  Percentages of Participants’ Responses to Survey Item #9

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>At this institution there are enough opportunities for me to connect with people from my cultural communities.</td>
<td>3%</td>
<td>10%</td>
<td>28%</td>
<td>39%</td>
<td>20%</td>
<td>3.64</td>
</tr>
<tr>
<td>In general, people at this institution value knowledge from my cultural communities.</td>
<td>3%</td>
<td>5%</td>
<td>35%</td>
<td>38%</td>
<td>19%</td>
<td>3.63</td>
</tr>
<tr>
<td>In general, my cultural communities are valued at this institution.</td>
<td>3%</td>
<td>6%</td>
<td>36%</td>
<td>36%</td>
<td>19%</td>
<td>3.62</td>
</tr>
<tr>
<td>In general, people at this institution value the experiences of people in my cultural communities.</td>
<td>3%</td>
<td>5%</td>
<td>36%</td>
<td>37%</td>
<td>19%</td>
<td>3.62</td>
</tr>
<tr>
<td>At this institution, there are enough opportunities to learn about the challenges that exist in my own cultural communities.</td>
<td>4%</td>
<td>9%</td>
<td>30%</td>
<td>35%</td>
<td>22%</td>
<td>3.61</td>
</tr>
<tr>
<td>At this institution, there are enough opportunities to learn about important issues within my own cultural communities.</td>
<td>4%</td>
<td>8%</td>
<td>31%</td>
<td>38%</td>
<td>19%</td>
<td>3.61</td>
</tr>
<tr>
<td>At this institution, there are enough opportunities to gain knowledge about my own cultural communities.</td>
<td>4%</td>
<td>10%</td>
<td>29%</td>
<td>36%</td>
<td>20%</td>
<td>3.60</td>
</tr>
<tr>
<td>At this institution, there are enough opportunities (e.g. research, community service projects, etc.) to help improve the lives of people in my cultural community.</td>
<td>4%</td>
<td>9%</td>
<td>30%</td>
<td>36%</td>
<td>21%</td>
<td>3.60</td>
</tr>
</tbody>
</table>
Table 13 (continued)

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Disagree or Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>At this institution, there are enough opportunities (e.g. research, community service projects, etc.) to give back to my cultural communities.</td>
<td>3%</td>
<td>10%</td>
<td>29%</td>
<td>37%</td>
<td>21%</td>
</tr>
<tr>
<td>At this institution, there are enough opportunities (e.g. research, community service projects, etc.) to positively impact my cultural communities.</td>
<td>4%</td>
<td>9%</td>
<td>32%</td>
<td>35%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 14 details sense of belonging mean scores, sample size, standard deviation, and score ranges by campus locations. Three campus locations, Campus Branch B (n=84, M=3.70, SD=0.70), Campus Branch D (n=84, M=3.77, SD=0.81) and Campus Branch E (n=10, M=3.78, SD=0.82), had a sense of belonging mean higher than the overall mean score (M = 3.58).

The results of the correlational analysis (N=234, M=3.58, SD=0.77) revealed a positive small correlation (r=0.20) between sense of belonging and persistence decisions for participants in this study. The results reveal that students with a more positive sense of belonging are more likely to persist at this community college. Respondent scores had a minimum score mean of 1.21 and a maximum score mean of 5.00.
Table 14

_Sense of Belonging Sample Size, Mean, Standard Deviation and Range by Campus Location_

<table>
<thead>
<tr>
<th>Campus Location</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Branch A</td>
<td>23</td>
<td>3.50</td>
<td>0.67</td>
<td>2.32</td>
<td>4.95</td>
</tr>
<tr>
<td>Campus Branch B</td>
<td>84</td>
<td>3.70</td>
<td>0.70</td>
<td>2.25</td>
<td>5.00</td>
</tr>
<tr>
<td>Campus Branch C</td>
<td>33</td>
<td>3.15</td>
<td>0.80</td>
<td>1.21</td>
<td>4.68</td>
</tr>
<tr>
<td>Campus Branch D</td>
<td>84</td>
<td>3.77</td>
<td>0.81</td>
<td>1.28</td>
<td>5.00</td>
</tr>
<tr>
<td>Campus Branch E</td>
<td>10</td>
<td>3.78</td>
<td>0.82</td>
<td>2.42</td>
<td>4.84</td>
</tr>
<tr>
<td>All Locations</td>
<td>234</td>
<td>3.58</td>
<td>0.77</td>
<td>1.21</td>
<td>5.00</td>
</tr>
</tbody>
</table>

**Examination of Research Question Three**

Research question three asked, _Are there significant differences among students’ perceptions of campus environment and sense of belonging based on racial/ethnic and gender identities?_ Two separate two-way ANOVAs were conducted to examine the main and interaction effects of two independent variables, race and gender, within the dependent variables, campus perceptions and sense of belonging. The first independent variable consisted of nine categories: Alaskan Native/American Indian/Native American, Black/African American, Asian American, Middle Eastern/Northern African, White, Multiracial, Latina/Latino/Latinx, Pacific Islander, and Prefer Not to Disclose. The second independent variable, gender, consisted of 10 categories: Agender, Androgyne, Demigender, Genderqueer/Gender-fluid, Man, Questioning/Unsure, Transman, Transwoman, Woman, and Prefer Not to Disclose. Table 15 presents the means and standard deviations for race and ethnicity when examining the main and interaction effect within campus perception scores. Table 15 also presents the overall means and standard deviations of the campus perceptions by race when gender is not considered. Table 16 presents the means and standard deviations of campus perceptions by gender regardless of race.
<table>
<thead>
<tr>
<th>Race &amp; Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaskan Native/American Indian/Native American</td>
<td>3.63</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>3.63</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3.63</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Black/African American</td>
<td>1.67</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>3.95</td>
<td>-0.69</td>
<td>34</td>
</tr>
<tr>
<td>Man</td>
<td>3.72</td>
<td>0.46</td>
<td>6</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>4.00</td>
<td>0.70</td>
<td>97</td>
</tr>
<tr>
<td>Woman</td>
<td>3.39</td>
<td>0.65</td>
<td>138</td>
</tr>
<tr>
<td>Total</td>
<td>3.39</td>
<td>0.65</td>
<td>138</td>
</tr>
<tr>
<td>Asian American</td>
<td>4.48</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>4.48</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>4.48</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Middle Eastern/Northern African</td>
<td>2.86</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>2.86</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>2.86</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>White</td>
<td>3.93</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Agender</td>
<td>2.76</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Demigender</td>
<td>3.89</td>
<td>0.63</td>
<td>20</td>
</tr>
<tr>
<td>Man</td>
<td>4.27</td>
<td>0.34</td>
<td>2</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>3.72</td>
<td>0.70</td>
<td>53</td>
</tr>
<tr>
<td>Woman</td>
<td>3.76</td>
<td>0.68</td>
<td>77</td>
</tr>
<tr>
<td>Total</td>
<td>3.76</td>
<td>0.68</td>
<td>77</td>
</tr>
<tr>
<td>Multiracial</td>
<td>2.05</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>3.46</td>
<td>0.93</td>
<td>3</td>
</tr>
<tr>
<td>Woman</td>
<td>3.10</td>
<td>1.03</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>3.10</td>
<td>1.03</td>
<td>4</td>
</tr>
<tr>
<td>Latina/Latino/Latinx</td>
<td>3.47</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Androgyne</td>
<td>3.45</td>
<td>0.47</td>
<td>4</td>
</tr>
<tr>
<td>Man</td>
<td>3.09</td>
<td>1.05</td>
<td>2</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>4.12</td>
<td>0.35</td>
<td>2</td>
</tr>
<tr>
<td>Woman</td>
<td>3.52</td>
<td>0.61</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>3.52</td>
<td>0.61</td>
<td>9</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>4.02</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>2.64</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>3.33</td>
<td>0.97</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>3.33</td>
<td>0.97</td>
<td>2</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>3.80</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>3.80</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>3.80</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Overall</td>
<td>3.54</td>
<td>0.71</td>
<td>234</td>
</tr>
</tbody>
</table>

Table 15

Campus Perception Mean, Standard Deviation and Sample Size by Race and Gender
Table 16

*Campus Perceptions Mean, Standard Deviation and Sample Size by Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agender</td>
<td>3.93</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Androgyne</td>
<td>3.46</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Demigender</td>
<td>2.77</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>1.67</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>3.89</td>
<td>0.65</td>
<td>60</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>3.53</td>
<td>0.81</td>
<td>10</td>
</tr>
<tr>
<td>Transman</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Transwoman</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Woman</td>
<td>3.89</td>
<td>0.70</td>
<td>159</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>2.64</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.85</strong></td>
<td><strong>0.71</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>

**Campus Environment Perceptions**

The mean differences in this group are quite small, varying by only 1 or 2 points from the overall mean of 3.54 (N=234, SD=0.71). Levene’s Test of Equality of Error Variances was performed and revealed that there were no significant differences in sample sizes (p=0.51) thus equal variances were assumed. Results revealed that there were no significant interaction effects of race and gender and the students’ perception of campus environment ($F(5,211) =1.42$, $p=0.22$, partial $\eta^2 = 0.033$). However, the results did reveal a simple main effect and campus environment perceptions ($F (7,211)= 2.81$, $p=0.01$, partial $\eta^2 = 0.085$). A Tukey post hoc was conducted to examine the simple main effect of gender.

Table 17 displays the weighted means, standard deviation, and lower and upper bound ranges within a 95% confidence interval. Table 18 presents the findings of a pairwise comparison that was conducted and revealed statistically significant differences in campus perception scores among gender groups. Respondents who identified as Questioning/Unsure had scores that significantly differed when compared to students who identified as Agender ($p=0.02$), Genderqueer/Gender-fluid ($p=0.02$), Man ($p=0.01$) or Woman ($p=0.01$). Additionally,
respondents who identified as Woman had scores that were significantly different than those who identified as Genderqueer/Gender-fluid ($p=0.00$), and those who identified as Genderqueer/Gender-fluid had statistically significant different scores than those who identified as Man ($p=0.01$), Woman ($p=0.00$) and Questioning/Unsure ($p=0.03$).

Table 17

*Weighted Means of Campus Perception Scores by Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upperbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agender</td>
<td>3.93</td>
<td>0.69</td>
<td>2.58</td>
<td>5.28</td>
</tr>
<tr>
<td>Androgyne</td>
<td>3.46</td>
<td>0.69</td>
<td>2.11</td>
<td>4.82</td>
</tr>
<tr>
<td>Demigender</td>
<td>2.77</td>
<td>0.69</td>
<td>1.41</td>
<td>4.12</td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>3.28</td>
<td>0.25</td>
<td>2.78</td>
<td>3.78</td>
</tr>
<tr>
<td>Man</td>
<td>3.67</td>
<td>0.19</td>
<td>3.31</td>
<td>4.04</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>1.67</td>
<td>0.69</td>
<td>0.32</td>
<td>3.02</td>
</tr>
<tr>
<td>Woman</td>
<td>3.91</td>
<td>0.25</td>
<td>3.56</td>
<td>4.26</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>2.64</td>
<td>0.69</td>
<td>1.29</td>
<td>3.97</td>
</tr>
</tbody>
</table>
Table 18

Pairwise Comparisons of Campus Perceptions Scores (Statistically Significant Findings)

<table>
<thead>
<tr>
<th>(I) Gender</th>
<th>(J) Gender</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agender</td>
<td>Questioning/Unsure</td>
<td>2.26</td>
<td>0.97</td>
<td>0.02</td>
<td>0.34</td>
<td>4.17</td>
</tr>
<tr>
<td>Man</td>
<td>Questioning/Unsure</td>
<td>2.00</td>
<td>0.71</td>
<td>0.01</td>
<td>0.59</td>
<td>3.40</td>
</tr>
<tr>
<td>Woman</td>
<td>Genderqueer/Gender-fluid</td>
<td>0.62</td>
<td>0.31</td>
<td>0.05</td>
<td>0.01</td>
<td>1.24</td>
</tr>
<tr>
<td></td>
<td>Questioning/Unsure</td>
<td>2.23</td>
<td>0.71</td>
<td>0.00</td>
<td>0.83</td>
<td>3.63</td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>Man</td>
<td>-2.00</td>
<td>0.71</td>
<td>0.01</td>
<td>-3.39</td>
<td>-0.60</td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>-0.62</td>
<td>0.31</td>
<td>0.05</td>
<td>-1.24</td>
<td>-0.10</td>
</tr>
<tr>
<td></td>
<td>Questioning/Unsure</td>
<td>1.61</td>
<td>0.73</td>
<td>0.03</td>
<td>0.17</td>
<td>3.05</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>Man</td>
<td>-2.00</td>
<td>0.71</td>
<td>0.01</td>
<td>-3.40</td>
<td>-0.60</td>
</tr>
<tr>
<td></td>
<td>Woman</td>
<td>-2.23</td>
<td>0.03</td>
<td>0.00</td>
<td>-3.63</td>
<td>-0.83</td>
</tr>
<tr>
<td></td>
<td>Genderqueer/Gender-fluid</td>
<td>-1.61</td>
<td>0.73</td>
<td>0.03</td>
<td>-3.05</td>
<td>-0.17</td>
</tr>
</tbody>
</table>

Findings are significant at the 0.05 level.

**Sense of Belonging**

Table 19 presents the means and standard deviations for race and ethnicity when examining the main and interaction effects for sense of belonging. Levene’s Test of Equality of Error Variances was performed and revealed that there were no significant differences in sample sizes ($p=0.51$), thus equal variances were assumed. The mean differences in this group are quite small, varying by only 1 or 2 points from the overall mean of 3.37 ($N=234$, $SD=0.64$). Table 20 presents the overall means and standard deviations of sense of belonging for race when gender is not considered. The Table 20 presents the means and standard deviations by gender regardless of race. The mean differences in this group are quite small, varying by only 1 or 2 points from the overall mean of ($N=234$, $M=3.61$ $SD=0.77$).
Table 19

*Sense of Belonging Mean, Standard Deviation and Sample Size by Race and Gender*

<table>
<thead>
<tr>
<th>Race &amp; Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaskan Native/American Indian/Native American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>3.56</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.56</strong></td>
<td>-</td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>Black/African American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>2.05</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>3.70</td>
<td>0.62</td>
<td>34</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>3.41</td>
<td>0.82</td>
<td>6</td>
</tr>
<tr>
<td>Woman</td>
<td>3.82</td>
<td>0.77</td>
<td>97</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.77</strong></td>
<td><strong>0.75</strong></td>
<td><strong>138</strong></td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>4.57</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.57</strong></td>
<td>-</td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>Middle Eastern/Northern African</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>3.00</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.00</strong></td>
<td>-</td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agender</td>
<td>3.53</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Demigender</td>
<td>3.15</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>3.71</td>
<td>0.64</td>
<td>20</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>3.52</td>
<td>0.30</td>
<td>2</td>
</tr>
<tr>
<td>Woman</td>
<td>3.41</td>
<td>0.73</td>
<td>53</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.21</strong></td>
<td><strong>.70</strong></td>
<td><strong>77</strong></td>
</tr>
<tr>
<td>Multiracial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>2.26</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Woman</td>
<td>2.78</td>
<td>1.03</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.53</strong></td>
<td><strong>0.90</strong></td>
<td><strong>4</strong></td>
</tr>
<tr>
<td>Latina/Latino/Latinx</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Androgyne</td>
<td>3.31</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>2.72</td>
<td>0.82</td>
<td>4</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>3.08</td>
<td>0.57</td>
<td>2</td>
</tr>
<tr>
<td>Woman</td>
<td>3.13</td>
<td>0.33</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.96</strong></td>
<td><strong>.60</strong></td>
<td><strong>9</strong></td>
</tr>
<tr>
<td>Pacific Islander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>3.42</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>3.05</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.30</strong></td>
<td><strong>0.26</strong></td>
<td><strong>2</strong></td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman</td>
<td>3.47</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.47</strong></td>
<td>-</td>
<td><strong>1</strong></td>
</tr>
<tr>
<td><strong>Overall Mean</strong></td>
<td><strong>3.37</strong></td>
<td><strong>0.64</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>
Table 20

*Sense of Belonging Mean, Standard Deviation and Sample Size by Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agender</td>
<td>3.09</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Androgyne</td>
<td>2.89</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Demigender</td>
<td>3.15</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Genderqueer/Gender-fluid</td>
<td>2.05</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Man</td>
<td>3.66</td>
<td>0.65</td>
<td>60</td>
</tr>
<tr>
<td>Questioning/Unsure</td>
<td>3.09</td>
<td>1.01</td>
<td>10</td>
</tr>
<tr>
<td>Transman</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Transwoman</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Woman</td>
<td>3.66</td>
<td>0.79</td>
<td>159</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>3.05</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.61</strong></td>
<td><strong>0.77</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>

There was insufficient evidence to detect an interaction effect between race and gender and sense of belonging scores ($F(5,211) = 1.25, p=0.28$, partial $\eta^2=0.03$). There was insufficient evidence to determine a simple main effect for gender ($F(7,211) = 1.56, p=0.15$, partial $\eta^2=0.05$). There was sufficient evidence to determine a simple main effect of race ($F(10,211) = 1.17, p=0.03$, partial $\eta^2=0.08$). A Tukey post hoc was conducted to examine the simple main effect of race on the sense of belonging.

Table 21 displays the weighted means, standard deviation, and lower and upper bound ranges within a 95% confidence interval. Table 22 presents the findings of a pairwise comparison that was conducted and revealed statistically significant differences in campus perception scores among racial groups. Respondents who identified as Multiracial experienced lower sense of belonging scores when compared to those who identified as Asian/Asian American ($p=0.04$), Pacific Islander ($p=0.01$), and White ($p=0.02$). Respondents who chose not to disclose their racial identity experienced a lower sense of belonging than those who identified as Pacific Islander ($p=0.02$).
**Table 21**

*Weighted Means of Sense of Belonging Scores by Race*

<table>
<thead>
<tr>
<th>Race</th>
<th>Mean</th>
<th>Std. Error</th>
<th>Lower Bound</th>
<th>Upperbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaskan Native/Native American</td>
<td>3.21</td>
<td>0.74</td>
<td>1.74</td>
<td>4.68</td>
</tr>
<tr>
<td>American/American Indian</td>
<td>3.56</td>
<td>0.43</td>
<td>2.71</td>
<td>4.41</td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td>3.25</td>
<td>0.21</td>
<td>2.84</td>
<td>3.66</td>
</tr>
<tr>
<td>Black/African American</td>
<td>3.47</td>
<td>0.75</td>
<td>2.00</td>
<td>4.94</td>
</tr>
<tr>
<td>Middle Eastern/Northern African</td>
<td>3.14</td>
<td>0.29</td>
<td>2.57</td>
<td>3.70</td>
</tr>
<tr>
<td>Latina/Latino/Latinx</td>
<td>2.41</td>
<td>0.38</td>
<td>1.66</td>
<td>3.15</td>
</tr>
<tr>
<td>Multiracial</td>
<td>4.58</td>
<td>0.74</td>
<td>3.11</td>
<td>4.97</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>3.47</td>
<td>0.24</td>
<td>3.02</td>
<td>3.96</td>
</tr>
<tr>
<td>White</td>
<td>2.52</td>
<td>0.53</td>
<td>1.48</td>
<td>3.57</td>
</tr>
<tr>
<td>Did Not Disclose</td>
<td>3.47</td>
<td>0.24</td>
<td>3.02</td>
<td>3.96</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>2.52</td>
<td>0.53</td>
<td>1.48</td>
<td>3.57</td>
</tr>
</tbody>
</table>

**Table 22**

*Pairwise Comparisons of Sense of Belonging Scores (Statistically Significant Findings)*

<table>
<thead>
<tr>
<th>(I)Race</th>
<th>(J) Race</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian/Asian American</td>
<td>Multiracial</td>
<td>1.16</td>
<td>0.57</td>
<td>.04</td>
<td>0.03</td>
<td>2.29</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>Multiracial</td>
<td>2.17</td>
<td>0.84</td>
<td>0.01</td>
<td>0.53</td>
<td>3.82</td>
</tr>
<tr>
<td>White</td>
<td>Multiracial</td>
<td>1.08</td>
<td>0.45</td>
<td>0.02</td>
<td>0.20</td>
<td>1.97</td>
</tr>
<tr>
<td>Multiracial</td>
<td>Asian/Asian American</td>
<td>-1.16</td>
<td>0.57</td>
<td>.04</td>
<td>-2.29</td>
<td>-0.03</td>
</tr>
<tr>
<td></td>
<td>Pacific Islander</td>
<td>-2.17</td>
<td>0.84</td>
<td>0.01</td>
<td>-3.82</td>
<td>-0.52</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>-1.08</td>
<td>0.45</td>
<td>0.02</td>
<td>-1.97</td>
<td>-0.20</td>
</tr>
<tr>
<td>Prefer Not to Disclose</td>
<td>Pacific Islander</td>
<td>-2.05</td>
<td>0.91</td>
<td>0.02</td>
<td>-3.85</td>
<td>-0.25</td>
</tr>
</tbody>
</table>

Findings are significant at the 0.05 level.
Examination of Research Question Four

Research question 4 asked, *Are there significant differences among students’ perceptions of campus environment and sense of belonging based on residential or commuter status?* Of 234 participants, 34% live on campus, 65% commute to campus, and 1% lack housing security. Levene’s Test of Equality of Variances was performed in two independent samples tests. One test was based on campus perception and the second test was on sense of belonging. A 95% confidence interval level was used where the critical value is 1.96. For campus perception, two variables were evaluated, equal variances assumed and equal variances not assumed. Both have a rounded standard error difference of .104, which is not significant. For a sense of belonging, two variables were evaluated, equal variances assumed and equal variances not assumed. Both variables have a rounded standard error difference of .09, which is not significant. Therefore, there is not sufficient evidence to assume that campus perceptions and a sense of belonging significantly differ based upon current living status.

Chapter Summary

The population for this study consisted of 6,054 part-time and full-time students enrolled in at least one traditional-style course at one community college in the southeastern part of the U.S. during the fall 2019 semester. A total of 234 completed responses were collected. The results of the surveys were collected and compiled in Survey Monkey® once the data collection phase concluded. The data were analyzed using IBM SPSS version 26.2.

Chapter IV presented an overview of the descriptions, statistical analyses, and results of the study. Descriptive statistics including means and standard deviation were used to help complete the data analysis phase. The results suggested that students who have a more positive perception of the campus environment are more likely to persist. It also suggested that students
who experience a stronger sense of belonging are also more likely to persist than those who did not. There was insufficient evidence to determine an interaction effect of race and gender with perceptions of campus environment. However, there was evidence to show a simple main effect of gender on the campus environment perceptions. The data revealed that individuals who identified as Questioning/Unsure experienced a more negative campus environment perception than those who identified as Agender, Genderqueer/Gender-fluid, Man or Woman. It was also found that those who identified as Genderqueer/Gender-fluid experienced a more negative campus perception than those who identified as Man or Woman; however, those individuals still had a more positive perception than those who identified as Questioning/Unsure.

The results also showed that a simple main effect existed between race and sense of belonging, although no interaction effect of race and gender existed with sense of belonging. After conducting further analysis, the data suggested that multiracial students experienced a lower sense of belonging when compared to those who identified as Asian/Asian American, Pacific Islander, and White. Additionally, students who did not disclose their racial identity experienced lower sense of belonging than those who identified as Pacific Islander. Lastly, the data revealed that there were no statistical differences in perceptions of campus environment and sense of belonging between residential and commuter students. The summary, conclusions, and recommendations based upon these findings are presented in Chapter V.
CHAPTER V
DISCUSSION OF FINDINGS

The purpose of this study was to determine if a student’s perceptions of campus environment and sense of belonging influenced persistence decisions for students at a rural community college in the southeastern part of the U.S. The study utilized the CECE Survey for Community Colleges (Museus et al., 2017), a 42-item survey that asks students various questions to collect data on sociodemographic characteristics; perceptions of opportunities to engage in cultural learning opportunities; availability of resources, trustworthiness and support of staff and students; and their sense of belonging. The current study contributed to the understanding of student persistence by providing an additional theoretical lens to understand student persistence factors. Chapter V presents the summary of results, discussion of findings and results, limitations, and recommendations for practitioners and policymakers and recommendations for future research based on the results from this study.

Summary of Results

This current study utilized Museus’ (2014) CECE Model of College Success as a theoretical lens to examine the effects of students’ perceptions of campus environment and sense and belonging on persistence decisions of community colleges within one rural community college in the southeastern part of the U.S. The CECE Model for College Success (Museus, 2014) is based upon more than 20 years of research and is grounded in the choices of all students regardless of racial/ethnic background. The CECE Model acknowledges that external influences
such as financial factors, employment, and family, as well as precollege inputs (e.g., learning, persistence and degree completion) all contribute to the persistence decisions of students. However, the core of the CECE Model emphasizes that college students’ access to culturally engaging campus environments is positively correlated with individual influences on success (e.g., sense of belonging, motivation, and the intent to persist) and increases the probability of succeeding in college (Museus, 2014). The CECE Model proposes that students will experience a higher likelihood of persisting and completing when they have access to culturally engaging campus environments and higher levels of sense of belonging.

This study utilized the CECE Survey for Community Colleges (Museus et al., 2017). The survey was administered online via Survey Monkey® to part-time and full-time students who were enrolled in a large community college in the southeastern part of the U.S. during the fall 2019 semester. Participants had to be enrolled in at least one traditional course within the college system. A total of 234 completed survey responses were collected from five of the six campus locations. Correlation analyses, two-way ANOVAs and a t-test were conducted to examine the four research questions. Discussion of the specific research questions are discussed later in the chapter.

The following results were found for each research question.

1. A small positive effect was found when examining the impact of student perceptions of campus environment on persistence decisions of students. The data suggested that students are more likely to persist when they have a positive perception of the campus environment.

2. A small positive effect was found when examining the impact of sense of belonging on persistence decisions of community college students. The data
suggested that students are more likely to persist when they have a strong sense of belonging within the college community.

3. There was insufficient evidence to determine an interaction effect of race and gender with campus environment perceptions and sense of belonging. However, a simple main effect of gender and campus environment perceptions did exist. The data revealed that students who identified as Questioning/Unsure had a less positive perception of the campus environment than those who identified as Man, Woman, Agender, or Genderqueer/Gender-fluid. The results also revealed a simple main effect of race on the sense of belonging. It was found that students who identified as Multiracial experienced lower sense of belonging than those students who identified as Asian/Asian American, Pacific Islander, or White.

4. There were no statistical differences of campus environment perceptions and sense of belonging between residential and commuter students.

Discussion of Findings and Results

This study examined the effect of campus environment perceptions and sense of belonging on persistence decisions of community college students within a rural community college in southeastern part of the U.S. The discussion of campus environment is grounded in the theoretical framework of Museus’ (2014) CECE model that used theories of Tinto (1993) and Astin (1984) but sought to add context to which persistence and retention are examined through the lens of cultural relevance within students’ experiences. Museus’ (2014) CECE model differs from Tinto’s (1975) theory of student integration because it does not assert that students must integrate into the institutional culture to persist. Museus’ (2014) model posits that if the student
has access to a culture that is culturally engaging to the student, the likelihood of student persistence increases.

Museus’ (2014) model acknowledges that student persistence is not just a result of student characteristics and motivation, but the result of how the student experiences the college environment. Culturally engaging campuses provide opportunities for students to physically connect with faculty, staff, and peers. They also provide opportunities for students to learn and exchange knowledge about their own cultural communities, conduct service activities that benefit their cultural communities, and acknowledges and seeks to understand issues that are important to the students’ cultural community (Museus, 2014). Additionally, campus that are culturally engaged exhibit cultural responsiveness. Institutions or environments that are culturally responsive exhibit values of team work and mutual success, have community members who care about and are committed to developing meaningful relationships with students, ensure students have the knowledge and resources needed to be successful, and have individuals or resources in place to provide support to students, regardless of the issues they face (Museus, 2014). The instrument used generated statements which the students could use to indicate whether they felt these opportunities, policies, or systems actually existed.

**Discussion of Research Question One**

Research question one examined the relationship between campus environment perceptions and persistence decisions. Campus environment perceptions were calculated by computing the mean for several questions or statements that asked the participants to assess how they felt about various interactions and opportunities presented within the institution. According to Museus (2017), if students perceive the campus as welcoming, they are more likely to seek help when needed. Additionally, students who are members of a culturally engaging environment
are more likely to persist (Museus, 2014). A culturally engaging environment contains characteristics such as cultural responsiveness and familiarity. These environments see and address the needs and challenges of their students by ensuring students have access to various resources. Overall, the data suggest that students at this institution have a positive view of the campus environment. When asked about various campus resources and connections, 71% of participants indicated that people send important information about available support, 76% indicated that they trust at least one person to provide them help when needed, and 79% indicated that they view the educators as caring individuals.

Another characteristic of a culturally engaging campus environment is whether the students feel as though the college promotes a team and mutual success concept versus a competitive and individualized approach (Museus, 2014). Participants at this institution perceived that individuals within this institution were supportive and caring. When asked whether participants felt supported, 79% indicated that they feel educators care about the students, 71% felt as though people supported each other, and 79% work together for common goals. Supportive environments play a critical role in the success of community college students as studies indicate that most students are at-risk (Barbatis, 2010) or academically unprepared (Cohen, Brawer, & Kisker, 2014; Crisp, Taffart, & Nora, 2015; Johnson et al., 2014). Supportive environments do more than encourage students to seek out resources. They can also increase students’ motivation to succeed. As a result of the positive experiences, 69% of the students stated that they feel better or much better about getting good grades than they did when they first enrolled at the institution. Furthermore, 78% feel better or much better about succeeding in college than compared to how they felt when they first enrolled. These environments also contribute to an increased skill set among students. The data revealed that 62% of the
participants indicated that they felt their ability to analyze complex problems improved, and 62% felt that they were better able to generate their own solutions since enrolling.

Lastly, when students perceive the campus as welcoming and supportive, they are more likely to persist (Cuellar & Johnson, 2016). This survey did consider student motivation. Participants were asked whether they felt they would complete their certificate, degree, or equivalent at any institution as well as this institution. The results revealed that students feel as though the institution provides them with resources and supports that would help them accomplish this goal as 60% indicated that they would complete their degree at this institution versus the 45% who stated that they would complete it at any institution. However, the results also showed that some students may not feel the same about the institution. When asked about the possibility of completing a certificate program or equivalent, 60% stated that they would be more likely to complete at this institution, while 65% indicated that they would at any institution. Certificate programs are usually hosted within the career and technical programs at this institution. It is unclear as to whether students in these programs feel as supported as students who are in traditional academic programs.

Campus environment perceptions are multidimensional. There are physical and psychological elements that are involved as defined by Wright-Mair (2017), who defined campus environment as the institutional surroundings that encompass both campus climate and cultures. Major events in communities can change the climate of the institution while culture is usually changed through more longstanding behaviors and policies. Campus environment includes the assessment of the physical and psychological spaces within the institution (Wright-Mair, 2017). Students need to feel as though they fit into the community. Overall, students at this particular institution possessed a positive view of the college environment. This was true regardless of
which campus they attended. Students usually associate the college with the location of the campus they attend; therefore, a student attending Campus Branch B is more familiar with the resources and staff on that particular campus than those that are offered on Campus A. Each campus possesses its own focus. For example, Campus Branch C is a commuter campus that has a focus on career and technical programs while Campus E is an urban campus that hosts the college’s health and allied health programs. The college has the responsibility to ensure that policies and quality and accessibility of resources are consistent across campuses. The results indicate that the college does a good job of ensuring its students feel welcomed whether at the “main campus” or its other branches as mean scores were similar. The results revealed that students who possess a more positive perception of campus environment are more likely to persist. This finding of this study is consistent with studies on student persistence (Cuellar & Johnson, 2016; Griffin et al., 2015; Johnson et al., 2014; & Worthington et al., 2008) that also found students are more likely to persist when they view the campus as welcoming and supportive.

Discussion of Research Question Two

Research question two examined the relationship between sense of belonging and persistence decisions among community college students. The discussion of sense of belonging for this study is also grounded in Museus’ (2014) CECE Model of College Success. Previous studies examined sense of belonging from the perspectives of racial and ethnic minorities (Booker, 2016; Deil-Amen, 2011; Hurtado & Carter, 1997; Maramba & Museus, 2011, Museus & Maramba, 2011; Museus & Nichols, 2008). This study first examines sense of belonging across racial lines. Museus’ model seeks to capture the voice of all students to determine whether the institution provides opportunities for all students to be seen and heard (Museus, 2014). Sense
of belonging is more than just combatting the feeling of loneliness or isolation but includes aspects of feeling as though the campus culture incorporates the students’ identities into its institutional fabric. Sense of belonging involves acknowledging students’ differences and providing opportunities to engage and support them. The conversation of sense of belonging is framed by using the term cultural communities. The instrument used in this study allowed students to define what the cultural community or communities were. Museus’ (2014) model acknowledges that student identities intersect, and a student may hold a position in more than one cultural community. For example, an individual can identify as a genderqueer African American. The survey allows the participant to assess the opportunities in relation to their personal identity. The survey does not allow the researcher to know which cultural community they identify with but does allow the researcher to determine whether the environment is culturally engaging to that student.

An aspect of a culturally engaging environment is physical representation. Students often feel as though they belong when they see people who look like them on the campus. Most participants (57%) found it easy to find people with similar backgrounds, and 58% indicated that it was easy to interact with people from similar backgrounds. While physical representation is important, it is not the only aspect of a culturally engaging campus. Culturally engaging environments provide opportunities for students to feel acknowledged and understood by the campus community. Although it is still positive, a lower percentage of students feel as though these opportunities exist within the institution. In terms of being understood, only 55% of students felt as though people understood their cultural communities, and 57% felt as though people were willing to understand their cultural communities. This is different as compared to the campus perception environment results which indicated that over 70% felt as though people
at the institution were caring individuals. The results suggest that although the college possesses caring individuals, these individuals may lack the cultural competency to ensure that students are being seen and valued.

Students feel valued and acknowledged when the college provides opportunities to learn and engage from different cultural communities (Museus, 2014). Opportunities to serve and give back can be integrated into classroom projects or extracurricular activities. When asked whether students felt as though these opportunities existed, 58% indicated that they were provided opportunities to give back to their cultural communities, and 57% indicated that they were provided with opportunities to learn about how to give back to their cultural communities. The results suggest that students may not be engaging in meaningful activities that are relevant to their cultural communities. These feelings can cause the students to feel as though they have to choose which community they should serve. Culturally engaging campus environments incorporate the personal lives of the students into the teachings and activities of the college. When this is successful, the challenge to maintain family ties are lessened. The results reveal that 26% of participants experience challenges in maintaining family ties. It is difficult to provide support for challenges that are not understood. The findings suggest that the college may not fully understand what challenges the students are facing therefore making it difficult to ensure policies, programs, and activities provide support for these communities.

Sense of belonging scores were captured by calculating the mean scores of several questions that asked the participants to quantify the frequency they felt valued, represented, and included within the institution. While the evidence of this study suggests that students possess a strong sense of belonging to the institution, it also suggests that there is a population of students who feel otherwise. Students at this institution experienced a strong sense of belonging
Data revealed that these positive feelings exist regardless of campus location as each campus had a mean score above three. The small variances within the scores reveal that the college does a good job in ensuring that students feel recognized, valued, and included regardless of physical location.

**Discussion of Research Question Three**

Conversations of campus environment perceptions and sense of belonging cannot occur without the mentioning of identity constructs. The researcher focused on racial/ethnic identity and gender identity for this study. Research question three examined the differences in campus perceptions and sense of belonging scores between and within racial/ethnic and gender groups. This research question did not seek to highlight underrepresented groups, but to determine whether differences did exist between or within these groups. Previous research found that students within the same racial/ethnic group may share vastly different campus experiences (Fike & Fike, 2008; Hart & Fellabaum, 2008; Hutchinson et al., 2008). However, these types of studies have often focused on the experiences of specific racial/ethnic groups or genders (Booker, 2016; Hurtado & Carter, 1997; Murphy & Zirkel, 2015; Shook & Clay, 2012). This study sought to take a comprehensive look and compare experiences across racial and gender lines. The results found that there were no significant interactions or effects between race and gender with sense of belonging or campus perceptions. However, the findings did reveal that there were significant simple plain effects for both variables. For campus perceptions, it was found that gender identity did have a significant effect on campus environment perceptions. It was also found that race/ethnic identity had a significant effect on sense of belonging for participants of this study.
Campus Environment Perceptions

Respondents who identified as Genderqueer/Gender-fluid or Unsure/Questioning viewed the campus more negatively than their counterparts within and across racial/ethnic groups. Campus environment is a byproduct of campus climate and campus culture. Campus climate is defined as the patterns and behaviors within an institution and the perceptions the members within the institution have or experience (White-Mair, 2009). Campus culture envelopes the curricular and co-curricular experiences (Denson & Change, 2015) and is shaped by historical, organizational, compositional, behavioral, and psychological factors within the institution. Campus climate can change with current events of the local and national community while campus culture acknowledges the more fixed patterns, policies, and traditions that occur within the institution (White-Mair, 2009). While it is not impossible to change campus culture, it does require more substantive changes in not only behaviors and attitudes, but oftentimes policies. Museus’ (2014) model highlights the importance that the campus environment must be engaging to the cultural community with which the student identifies. When this does not happen, students will often withdraw from the institution and not seek resources to help them remain successful (Hotchkins & Dancy, 2017; Museus, 2014).

Sense of Belonging

Results revealed a simple main effect between race and sense of belonging. According to the findings, students who identified as Multiracial experienced lower feelings of belonging when compared to individuals who identified as Asian/Asian American, Pacific Islander, and White. Multiracial students accounted for 2% of the sample while White students accounted for 33%, Pacific Islander accounted for 1%, and Asian/Asian American accounted for 1% of the sample for this study. It is unclear whether participants may feel this way because of the
institutional make-up of the college or the availability of resources. The student population of the research site is largely African American (59%) and White (33%). African American students, regardless of gender, reported more positive campus environment experiences and sense of belonging. It is possible that these positive experiences stem from the fact that several campus branches provided resources that specifically targeted African American students. Members of racial identity groups who are not as visible on-campus may struggle to find resources and spaces that address their needs and concerns or feel as though the college does not address their community’s needs. Resources that target particular racial identities can force students to dissect or choose between their racial identities. For example, Campus D’s minority male mentorship program specifically targets African American males. Whether these programs serve other minorities is unclear; however, students may view this as a resource that is unavailable to them because they do not fit completely into the description.

Discussion of Research Question Four

Research question four examined whether differences among perceptions of campus environment and sense of belonging existed between residential and commuter students. Out of the 234 completed responses, 34% reported that they lived on campus. The results of the study revealed that no differences existed between commuter and residential student groups in terms of campus environment perceptions and sense of belonging.

The finding in this study is unlike those of previous studies that states that students who live on campus experience better grades and overall satisfaction than those who do not (Kuh, Kinzie, Schuh & White, 2010; Long, 2014; Lopez & Woodtke, 2010; Pascarelli & Terenzeni, 2005). This study did not focus on the conditions and experiences of residence halls but wanted to see whether these students experienced the campus differently. It is unclear whether living on
campus at a community college yields the same benefit as it does at large 4-year institutions. However, it is important to note that the percentage of students living on-campus at this institution is significantly higher than that national average which indicates that only 1.5% of students who attend community colleges that provide student housing reside on-campus (American Association of Community Colleges, 2019). It is likely that on-campus housing at rural community colleges provide different benefits than on-campus housing options at four-year institutions and urban community colleges.

Limitations

The researcher recognized the following limitations of the study after conducting research.

- The number of respondents who completed the survey was small. A better rate may have been achieved if a chance to potentially win an incentive was offered. Participants were informed in the email that there was no direct incentive for completing the survey; therefore, the researcher relied solely on their interest in completing the survey.

- While online surveys are economical and efficient, they provide an opportunity for participants to ignore or skip over requests to complete.

- The number of respondents may also limit the generalizability of this study when compared to other institutions within the state or region.

- The understanding of campus environment requires a look into the relationships, resources, and physical spaces of the specific campus. Generalizability for this study may be difficult due to this.
• The researcher relied on the honesty of participants. Participants self-identified race, gender, and other demographic characteristics. There was no way to verify whether a student was being honest in his/her responses.

• The small number of responses for some gender and racial identity groups were small and limited the researcher’s ability to potentially identify more significant findings of campus environment perceptions and sense of belonging.

**Recommendations for Practitioners and Policymakers**

The findings of this study can inform practitioners and policymakers about the planning and implementation of institutional programs, resources, and policies that better support students as they matriculate through college. The following recommendations should be considered:

**Consideration of Community Memberships**

Practitioners need to consider whether programmatic efforts and conversations are inclusive of all identity communities regardless of the size of the community. Services and events should not only include the identity of the campus community but create opportunities for students and staff to link local community interests and identities with those of the campus community. Ideas for these efforts include community service projects to allow students to serve the communities which they come from, forums to learn about and acknowledge local history and traditions, or coursework that challenge students to engage with local and campus organizations of specific groups. Policymakers should ensure that policies do not leave out the voices of groups that are not easily represented. This can be completed by increasing the options to which students are able to self-identify. Limiting students’ self-reporting options provides a simpler reporting system; however, it silences individual community members which could
result in the implementation of policies that exclude or negatively impact these community groups.

**Increase Campus Support and Resources for Underrepresented Groups**

The results of this study revealed that students who identify as Questioning/Unsure or Genderqueer/Gender-fluid identities possessed a more negative campus environment view. Practitioners should work to ensure that resources, which include physical spaces, events, and activities are available and accessible to students. These resources should be widely publicized in more commonly-used resources such as the library or dining hall. Practitioners must become familiar with the challenges and work with students to create conversations on how to better serve groups that feel isolated from the campus community. Events that allow for students to learn about these cultures should be held throughout the year and not just during certain months.

**Cultural Competency Training for Faculty and Staff**

The results of this study found that although students felt as though faculty and staff cared about them, they also felt as though the faculty and staff did not understand challenges and issues facing their specific cultural communities. Faculty and staff within diverse settings should receive training to increase cultural competencies and reduce the occurrence of bias incidents or mistakes.

**Recommendations for Future Research**

As community colleges seek to improve student persistence and completion rates, further research is needed in what roles the campus environment and sense of belonging play in the persistence decisions of community college students. The following recommendations for future research should be considered:
Utilization of Different Theoretical Frameworks

Studies involving persistence decisions have relied heavily on the works of Tinto (1993) and Astin (1984). The contributions of these works are helpful but do not fully address the needs and experiences of marginalized and/or underrepresented groups. The cultural critiques of these models cannot be ignored. Responsibility of student persistence should not rest fully on the student; therefore, the understanding of how campus environment contributes to this factor needs to be examined from a theoretical approach that takes cultural realities into consideration.

Continued Studies to Include Community Colleges

Empirical studies that include community college students are limited. If practitioners and policymakers are to be guided by research, then more research involving community colleges is needed. Additionally, the research needs to be diverse in approach and include quantitative and qualitative studies especially as students’ perceptions and sense of belonging are explored.

Inclusive Campus Environment and Sense of Belonging Studies

More diverse research is needed in the conversations regarding campus environment and sense of belonging. More gender studies are needed considering that today’s student no longer identifies as simply male or female. Studies on how gender identity influences campus environment and perceptions should be increased. Additionally, studies should focus on how these identities intersect within and across racial and gender identity groups to develop a more comprehensive look into campus environment perceptions and sense of belonging. Lastly, studies need to include how individuals who identify as multiracial experience and perceive campus environments.
Qualitative Studies on Campus Environment Perceptions and Sense of Belonging

The current study identified groups who reported less positive experiences in campus environment perceptions and sense of belonging. However, the quantitative nature of this study prevents the researcher from understanding why respondents expressed more negative experiences. Qualitative studies would allow for respondents to explain what factors specifically contribute to these different experiences.
REFERENCES


The University of Chicago.

Syracuse University.


APPENDIX A

MISSISSIPPI STATE UNIVERSITY IRB APPROVAL EMAIL
Approval Notice for Study # IRB-19-213, An Examination of the Impact of Campus Environment Perceptions and Sense of Belonging on the Persistence Decisions at a Rural Community College

To: sbk2@msstate.edu, cth66@msstate.edu, ltc1@msstate.edu, mef348@msstate.edu, smj70@msstate.edu

Protocol ID: IRB-19-213

Principal Investigator: Stephanie King

Protocol Title: An Examination of the Impact of Campus Environment Perceptions and Sense of Belonging on the Persistence Decisions at a Rural Community College

Review Type: EXEMPT

Approval Date: August 07, 2019

Expiration Date: August 06, 2024

The above referenced study has been approved. To access your approval documents, log into myProtocol and click on the protocol number to open the approved study. Your official approval letter can be found under the Event History section. For non-Exempt approved studies, all stamped documents (e.g., consent, recruitment) can be found in the Attachment section and are labeled accordingly.

If you have any questions that the HRPP can assist you in answering, please do not hesitate to contact us at irb@research.msstate.edu or 662.325.3994.
APPENDIX B

THE CECE COMMUNITY COLLEGE SURVEY
The CECE Community College Survey

The results of this survey will be used to help educators understand how to improve your college experience and the experiences of all colleges students at this institution. Your honest answers are important. Please help us by taking a few minutes to answer the following questions. Thank you!

1. **To what extent do you disagree or agree with the following statements?**  
   *Response options: Strongly disagree, Disagree, Neither disagree nor agree, Agree, Strongly agree*
   - People at this institution often send me important information about new learning opportunities.
   - People at this institution often send me important information about supports that are available.
   - People at this institution check in with me regularly to see if I need support.
   - If I need support, I know a person at this institution who I trust to give me that support.
   - If I have a problem, I know a person at this institution who I trust to help me solve that problem.
   - If I need information, I know a person at this institution who I trust to give me the information that I need.
   - I feel like I am part of the community at this institution.
   - I feel like I belong at this institution.
   - I feel a strong connection to the community at this institution.

2. **When you first came to this institution, how often did you experience the following:**  
   *Response options: Never, Rarely, Sometimes, Often, Always*
   - Difficulty making friends
   - Difficulty maintaining strong ties with pre-college friends
   - Difficulty maintaining strong ties with family
   - Feeling isolated

3. **To what extent do you disagree or agree with the following statements?**  
   *Response options: Strongly disagree, Disagree, Neither disagree nor agree, Agree, Strongly agree*
   - At this institution, there are enough opportunities to discuss important social issues with people from different cultural backgrounds.
   - At this institution, there are enough opportunities to discuss important political issues with people from different cultural backgrounds.
   - At this institution, there are enough opportunities to discuss important diversity-related issues with people from different cultural backgrounds.
   - In general, people at this institution help each other succeed.
   - In general, people at this institution support each other.
   - In general, people at this institution work together toward common goals.
   - In general, educators care about students at this institution.
   - In general, educators at this institution are committed to my success.
   - In general, I view educators at this institution as caring human beings.

4. **To what extent do you disagree or agree with the following statements?**  
   *Response options: Strongly disagree, Disagree, Neither disagree nor agree, Agree, Strongly agree*
● It is easy to find people at this institution with similar backgrounds as me.
● I frequently interact with people from similar backgrounds as me at this institution.
● It is easy to find people at this institution who understand me.
● It is easy to find people at this institution who understand my struggles.
● People at this institution are generally willing to take time to understand my experiences.

4. Compared to when you first entered this institution, how would you describe your CURRENT ABILITY to do the following?
   Response options: Much worse, Worse, About the same, Better, Much better
   - Analyze complex problems
   - Generate your own solutions to complex problems
   - Be an effective leader
   - Write effectively
   - Verbally communicate your ideas effectively
   - Learn on your own
   - Work productively on a team
   - Be successful in college
   - Perform well in a job
   - Understand your different career options
   - Understand viewpoints that are different than your own
   - Understand cultures different from your own
   - Appreciate cultures different from your own
   - Accept people from cultures different from your own
   - Communicate with people from communities different than your own
   - Work effectively with people from communities different than your own
   - Have a positive impact on your own cultural communities
   - Have a positive impact on larger society

5. Compared to when you first entered this institution, how would you describe your CURRENT COMMITMENT to do the following?
   Response options: Much worse, Worse, About the same, Better, Much better
   - Work hard in school
   - Get good grades
   - Learn as much as possible during college
   - Have a positive impact on your own communities
   - Have a positive impact on larger society

8. How satisfied are you with your college experience at this institution?
   Response options: Very dissatisfied, Dissatisfied, Neither dissatisfied nor satisfied, Satisfied, Very satisfied

9. The term “cultural communities” can mean many things. It can refer to a national community, a racial or ethnic community (Asian American, Black, White, etc.), a religious community, a LGBTQIA+ community, or even a community in the neighborhood where you grew up or currently live. To what extent do you disagree or agree with the following statements regarding your own cultural communities?
   Response options: Strongly disagree, Disagree, Neither disagree nor agree, Agree, Strongly agree
   - At this institution, there are enough opportunities for me to connect with people from my
cultural communities.

- In general, people at this institution value knowledge from my cultural communities.
- In general, my cultural communities are valued at this institution.
- In general, people at this institution value the experiences of people in my cultural communities.
- At this institution, there are enough opportunities to learn about the challenges that exist in my own cultural communities.
- At this institution, there are enough opportunities to learn about important issues within my own cultural communities.
- At this institution, there are enough opportunities to gain knowledge about my own cultural communities.
- At this institution, there are enough opportunities (e.g., research, community service projects, etc.) to help improve the lives of people in my cultural communities.
- At this institution, there are enough opportunities (e.g., research, community service projects, etc.) to give back to my cultural communities.
- At this institution, there are enough opportunities (e.g., research, community service projects, etc.) to positively impact my cultural communities.

10. Which cultural communities came to mind when you answered the questions above?
______________________ (text entry)

11. When you first enrolled at this institution, what was the highest credential you intended to complete in your lifetime?
- I did not intend to complete a college certificate or degree
- College certificate
- Associate’s degree (AA) or equivalent
- Bachelor’s degree (BA, BS) or equivalent
- Master’s degree (MA, MBA, MEd, MFA) or equivalent
- Doctoral or professional degree (PhD, EdD, JD, MD) or equivalent
- Other (Please specify): _____________
- I don’t know

11a. Why did you initially enroll in this institution? (select all that apply)
- Prepare for a job I want in the future
- Gain knowledge about potential new job options
- Improve my ability to do my current job
- Prepare for transfer to a four-year college or university
- Better understand my purpose in life
- Improve my life
- Develop skills to have a positive impact on my community
- Develop skills to have a positive impact on the world

12. What is the highest credential you currently intend to complete?
- I do not intend to complete a college certificate or degree
- College certificate
- Associate’s Degree (AA) or equivalent
- Bachelor’s Degree (BA, BS) or equivalent
- Master’s Degree (MA, MBA, MEd, MFA) or equivalent
- Doctoral or Professional Degree (PhD, EdD, JD, MD) or equivalent
13. How likely or unlikely is it that you will complete a college certificate at this institution?
   Response options: Very unlikely, Unlikely, Likely, Very likely, Already completed a college certificate, I don’t know

14. How likely or unlikely is it that you will complete a college certificate or equivalent at any institution?
   Response options: Very unlikely, Unlikely, Likely, Very likely, Already completed a college certificate, I don’t know

15. How likely or unlikely is it that you will complete an associate’s degree (AA) or equivalent at this institution?
   Response options: Very unlikely, Unlikely, Likely, Very likely, Already completed an associate’s degree, I don’t know

16. How likely or unlikely is it that you will complete an associate’s degree (AA) or equivalent at any institution?
   Response options: Very unlikely, Unlikely, Likely, Very likely, Already completed an associate’s degree, I don’t know

17. How likely or unlikely is it that you will transfer to a four-year college or university in the future?
   Response options: Very unlikely, Unlikely, Likely, Very likely, I don’t know

18. How many credits are you taking this quarter/semester in the following formats?
   Response options for each category: 0-3, 4-6, 7-9, Over 9
   a. Face-to-face (entire class is taught in a physical classroom)
   b. Online or distance (entire class is taught virtually or online)
   c. Hybrid (class uses a combination of face-to-face and online methods)

19. About how many credits did you complete at this institution prior to the start of the current quarter/semester?
   Response options: 0, 1-30, 31-60, 61-90, Over 90

20. [For student answering other than 0 from Q20] Please estimate your overall GPA at this institution:
    Response options: 0.0-0.5, 0.6-1.0, 1.1-1.5, 1.6-2.0, 2.1-2.5, 2.6-3.0, 3.1-3.5, 3.6 or over, Not applicable

21. How many majors do you have?
    Response options: 1, More than 1, Undecided/undeclared

22. Please select your major or expected major area: (select one)
<p>| a. Agriculture and natural resources | s. Humanities |
| b. Architecture or regional planning | t. Law and criminal justice |
| c. Biological sciences | u. Library science |
| d. Business | v. Mathematics and statistics |
| e. Communication, media, and public relations | w. Mechanics and repair |
| f. Computer science and technology | x. Military science and technology |
| g. Conservation and natural resources | y. Parks, recreation, leisure studies, and sports management |
| h. Construction fields (carpentry, masonry, plumbing, etc.) | z. Personal services (e.g., cosmetic, culinary, etc.) |
| i. Education | aa. Physical sciences |
| j. Engineering | bb. Precision trades (graphic, metal work, carpentry, etc.) |
| k. Family and consumer studies | cc. Public administration/policy |</p>
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<td>Fine, visual, and performing arts</td>
<td>dd. Science technology (aviation, radiology, veterinary technology, etc.)</td>
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<td>Hospitality and tourism</td>
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23. **What best describes your current living situation?** (select one)
   - I live on campus
   - I live within walking distance to campus
   - I live farther than walking distance to campus
   - I lack housing security
   - None of the above

24. **About how many total hours per week do you work ON campus (please include hours worked for paid jobs, internships, and assistantships on campus)?**
   - 0
   - 1-5
   - 6-10
   - 11-15
   - 16-20
   - 21-25
   - 26-30
   - Over 30

25. **About how many hours per week do you work OFF campus (please include hours worked for paid jobs, internships, and assistantships off campus)?**
   - 0
   - 1-5
   - 6-10
   - 11-15
   - 16-20
   - 21-25

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26. Please estimate your overall high school GPA:
   - 0.0-0.5
   - 0.6-1.0
   - 1.1-1.5
   - 1.6-2.0
   - 2.1-2.5
   - 2.6-3.0
   - 3.1-3.5
   - 3.6 or over
   - Not applicable

27. About how many advanced placement (AP) or international baccalaureate (IB) courses did you complete in high school?
   Response options: 0 to 9, 10 and over, Not applicable

28. How old are you? Response options: each year from 18 to 35, 36-40, 41-45, 46-50, Over 50

29. What race do you identify with? (select all that apply)
   - Alaska Native, American Indian, or Native American
   - Asian or Asian American
   - Black or African American
   - Latina/Latino/Latinx
   - Middle Eastern or Northern African
   - Pacific Islander
   - White
   - Multiracial
   - I prefer to self-describe: ____________________
   - I prefer not to respond

30. Ethnicity
   30a. [If selected Alaska Native, American Indian, or Native American], Which Alaska Native, American Indian, or Native American tribes do you identify with? (select all that apply)
   - Alaska Athabascan
   - Aleut
   - Apache
   - Cherokee
   - Chippewa
   - Choctaw
   - Creek
   - Inuit
   - Iroquois
   - Lumbee
   - Navajo
   - Pueblo
   - Sioux
• Tlingit-Haida
• I prefer to self-describe: ____________
• No tribal affiliation
• I prefer not to respond

30b. [If selected Asian or Asian American], Which Asian American ethnicities do you identify with? (select all that apply)
• Bangladeshi
• Burmese
• Cambodian
• Chinese
• Filipino
• Hmong
• Indian
• Indonesian
• Japanese
• Korean
• Laotian
• Malaysian
• Pakistani
• Taiwanese
• Thai
• Vietnamese
• I prefer to self-describe: ____________
• I prefer not to respond

30c. [If selected Black or African American], Which Black or African American ethnicities do you identify with? (select all that apply)
• Afro-Latinx
• Caribbean
• East African
• South African
• West African I prefer to self-describe: ____________
• I prefer not to respond

30d. [If selected Latina/Latino/Latinx], Which Latina/Latino/Latinx ethnicities do you identify with? (select all that apply)
• Cuban
• Central American
• Dominican
• Mexican
• Puerto Rican
• South American
• I prefer to self-describe: ____________
• I prefer not to respond
30e. [If Middle Eastern or Northern African], Which Middle Eastern or Northern African ethnicities do you identify with? (select all that apply)

- Algerian
- Amazigh or Berber
- Arab or Arabic
- Assyrian
- Bahraini
- Bedouin
- Chaldean
- Druze
- Egyptian
- Emirati
- Iraqi
- Iranian
- Israeli
- Jordanian
- Kurdish
- Kuwaiti
- Lebanese
- Libyan
- Moroccan
- Omani
- Palestinian
- Qatari
- Saudi Arabian
- Syrian
- Tunisian
- Yemeni
- I prefer to self-describe: __________
- I prefer not to respond

30f. [If selected Pacific Islander], Which Pacific Islander ethnicities do you identify with? (select all that apply)

- Chamorro
- Chuukese
- Fijian
- Guamanian
- Mariana Islander
- Marshallese
- Native Hawaiian
- Palauan
- Saipanese
- Samoan
- Tahitian
- Tokelauan
- Tongan
- I prefer to self-describe: __________
- I prefer not to respond
31. What best describes your class background growing up?
   ● Working class
   ● Middle class
   ● Upper class (rich)

32. What is the highest level of education completed by any of your parents/guardians who raised you?
   ● Did not finish high school
   ● High school diploma or GED
   ● Some college, but did not complete a college certificate or degree
   ● College certificate
   ● Associate’s Degree (AA) or equivalent
   ● Bachelor’s Degree (BA, BS) or equivalent
   ● Master’s Degree (MA, MBA, MEd, MFA) or equivalent
   ● Doctoral or Professional Degree (EdD, JD, MD, PhD) or equivalent
   ● I don’t know
   ● Not applicable

33. What is your gender identity? (select all that apply)
   ● Agender
   ● Androgyne
   ● Demigender
   ● Genderqueer or gender fluid
   ● Man
   ● Questioning or unsure
   ● Trans man
   ● Trans woman
   ● Woman
   ● I prefer to self-describe: __________
   ● I prefer not to respond

34. What is your sexual orientation? (select all that apply)
   ● Asexual
   ● Bisexual
   ● Gay
   ● Heterosexual/Straight
   ● Lesbian
   ● Pansexual
   ● Queer
   ● Questioning or unsure
   ● I prefer to self-describe: ______________
   ● I prefer not to respond

35. Have you been diagnosed with a disability or impairment?
   ● Yes
   ● No
   ● I prefer not to respond
35a. [If Yes from Q35], Please select the condition(s) with which you identify: (select all that apply)

- A cognitive or learning disability
- A head injury or brain disability
- A mental health disorder
- A spinal cord disability
- Hearing impairment
- Mobility or physical impairment
- Speech or language impairment
- Vision or hearing impairment
- Another disability or impairment (Please specify): _____________
- I prefer not to respond

36. What are your religious affiliation or beliefs? (select all that apply)

- Agnosticism
- Atheism
- Baha’ism
- Buddhism
- Christianity
- Hinduism
- Jainism
- Judaism
- Islam
- Native American Tradition(s)
- Native Hawaiian Tradition(s)
- Paganism
- Secular Humanism
- Shintoism
- Sikhism
- Spiritual
- Taoism (Daoism)
- Unitarianism
- Other religion (Please clarify): _____________
- I do not identify with any religion
- I prefer not to respond

36a. [if chose Christian]

- Christian: Baptist
- Christian: Catholic
- Christian: Church of Jesus Christ of Latter Day Saints (Mormon)
- Christian: Evangelical
- Christian: Jehovah’s Witness
- Christian: Lutheran
- Christian: Methodist
- Christian: Nondenominational
- Christian: Orthodox
- Christian: Pentecostal
- Christian: Presbyterian
• Christian: Protestant
• Christian: Other

37. Please select all of the following characteristics that describe you:

- Formerly incarcerated (formerly in prison)
- Former or current foster child
- Parent, guardian, or caregiver (who supports at least one dependent, including children, family member, or sibling)
- A military veteran (former member of the U.S. Armed Forces, Reserves, or National Guard)
- A current member of the U.S. Armed Forces, Reserves, or National Guard
- An online learner (who mainly takes courses delivered in an online format)
- An English language learner
- A student-athlete who plays for a team that is sponsored by your campus athletics department

37a. [If student-athlete from Q37], In which sports do you participate for your institution? (select all that apply)

- Baseball
- Basketball
- Bowling
- Crew
- Cross country or track and field
- Fencing
- Field or ice hockey
- Football
- Golf
- Gymnastics
- Lacrosse
- Soccer
- Softball
- Swimming and diving
- Tennis
- Volleyball
- Water polo
- Wrestling
- Another sport (Please specify): ________________

38. What is your status in the U.S.?

- U.S. citizen, U.S. national, or permanent resident
- International student
- COFA migrant (with Palau, Marshall Islands, or Federated States of Micronesia citizenship)
- Other status (Please specify): ________________
- I prefer not to respond

39. [If U.S. citizen, U.S. national, or permanent resident from Q38],
39a. Which of the following best describes the students in your high school?
   • Mostly White
   • Mostly Asian American
   • Mostly Black or African American
   • Mostly Latina/Latino/Latinx
   • Mostly Alaska Native, American Indian, or Native American
   • Mostly Pacific Islander
   • Mostly racially diverse
   • Not applicable (e.g., you were home schooled, etc.)

39b. Which of the following best describes the families of students in your high school?
   • Mostly working class
   • Mostly middle class
   • Mostly upper class (rich)
   • Mostly a mix of class backgrounds
   • Not applicable

40. [If international student from Q38], What region of the world did you come from?
   • Africa
   • Asia
   • Central America, Latin America, or Caribbean
   • Europe
   • Middle East
   • North America
   • Oceania
   • South America

40a. [Depending on region], What country/territory did you come from?
   • Africa
     o Algeria
     o Angola
     o Benin
     o Botswana
     o Burkina Faso
     o Burundi
     o Cabo Verde/Cape Verde
     o Cameroon
     o Central African Republic
     o Chad
     o Comoros
     o Congo
     o Congo, Republic of the (Brazzaville)
     o Congo, Dem. Rep. of the (Kinshasa)
     o Djibouti
     o Egypt
     o Equatorial Guinea
     o Eritrea
     o Ethiopia
Japan
Kazakhstan
Kyrgyzstan
Laos
Macau
Malaysia
Maldives
Mongolia
Myanmar
Nepal
North Korea
Pakistan
Philippines
Singapore
South Korea
Sri Lanka
Taiwan
Tajikistan
Thailand
Turkmenistan
Uzbekistan
Vietnam
Other country in Asia (Please specify): ____________

Central America, Latin America, or Caribbean
Anguilla
Antigua and Barbuda
Aruba
Bahamas
Barbados
Belize
Bermuda
British Virgin Islands
Cayman Islands
Costa Rica
Cuba
Curacao
Dominica
Dominican Republic
El Salvador
Grenada
Guadeloupe
Guatemala
Haiti
Honduras
Jamaica
Martinique
Mexico
Montserrat
Nicaragua
- Panama
- St. Kitts and Nevis
- St. Lucia
- St. Vincent and the Grenadines
- Sint Maarten
- Trinidad and Tobago
- Turks and Caicos
- Other country in Latin America or the Caribbean (Please specify): __________

- Europe
  - Albania
  - Andorra
  - Armenia
  - Austria
  - Azerbaijan
  - Belarus
  - Belgium
  - Bosnia and Herzegovina
  - Bulgaria
  - Croatia
  - Cyprus
  - Czech Republic
  - Denmark
  - Estonia
  - Finland
  - France
  - Georgia
  - Germany
  - Gibraltar
  - Greece
  - Hungary
  - Iceland
  - Ireland
  - Italy
  - Kosovo
  - Latvia
  - Liechtenstein
  - Lithuania
  - Luxembourg
  - Macedonia
  - Malta
  - Moldova
  - Monaco
  - Montenegro
  - Netherlands
  - Norway
  - Poland
  - Portugal
  - Romania
  - Russia
- San Marino
- Serbia
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey
- Ukraine
- United Kingdom
- Vatican City/Holy See
- Other country in Europe (Please specify): _______

- Middle East
  - Bahrain
  - Iran
  - Iraq
  - Israel
  - Jordan
  - Kuwait
  - Lebanon
  - Oman
  - Palestinian Territories
  - Qatar
  - Saudi Arabia
  - Syria
  - United Arab Emirates
  - Yemen
  - Other country in Middle East (Please specify): _______

- North America
  - Canada
  - Mexico

- Oceania
  - American Samoa
  - Australia
  - Caroline Islands
  - Chuuk
  - Cook Islands
  - Federated States of Micronesia
  - Fiji
  - French Polynesia
  - Guam
  - Kiribati
  - Kosrae
  - Mariana Islands
  - Marshall Islands
  - Micronesia
  - Nauru
  - New Caledonia
  - New Zealand
○ Niue
○ Palau
○ Papua New Guinea
○ Pohnpei
○ Saipan
○ Samoa
○ Solomon Islands
○ Tahiti
○ Tokelau
○ Tonga
○ Tuvalu
○ Vanuatu
○ Wallis and Futuna
○ Yap
○ Other country/territory in Oceania (Please specify): ______

- South America
  ○ Argentina
  ○ Bolivia
  ○ Brazil
  ○ Chile
  ○ Colombia
  ○ Ecuador
  ○ Falkland Islands
  ○ French Guiana
  ○ Guyana
  ○ Paraguay
  ○ Peru
  ○ Suriname
  ○ Uruguay
  ○ Venezuela
  ○ Other country in South America (Please specify): ____

41. Can you describe any activities/programs that made you feel included or helped you succeed at this institution? ________________________________

42. Is there anything else that is not captured by this survey and that you think we should know? ________________________________