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Minority Students in College: Finding Sense of Community

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Minority Students in College: Finding Sense of Community

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Abstract

College can be a challenging time for most students; however, it can be especially challenging for minority students. Research indicates minority students can have significant differences in college experiences compared to their White counterparts’ experiences, often participating in environments perceived as unwelcoming, which create barriers to adjustment and integration for minority students within the college or university, as well as health implications. However, research also indicates minority students receive support through a variety of mechanisms which contribute to their adjustment and success while in college. The minority student college experience is complex and diverse, warranting greater understanding. Of particular importance, however, is the influence such collegiate experiences may have on minority students’ sense of community while in college. Understanding minority students’ collegiate experiences can provide valuable insight into how sense of community may be understood and actualized for such students, compared to their White counterparts. Accordingly, the present study has sought to establish the connection between minority students’ collegiate experiences and their sense of community, discussing: minority students’ sense of community in the campus, minority students’ sense of community in additional communities within the campus, factors contributing to or hindering sense of community, and sense of community’s influence on academic achievement.

Keywords: minority, student, college, university, sense of community, belonging, SCI-2
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Is there a relationship between Sense of Community and self-reported Grade Point Average?

Is there a relationship between Sense of Community for Campus Community and other communities?

Does minority background influence Sense of Community for Campus Community?

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**Definition of Terms**

For greater comprehensibility, the following terms have been defined to provide the reader with the context in which such terms have been used.

**Academic Communities**

Communities respondents participate in which reflect informal and formal programs focused on students’ academic success (e.g. academic departments, living learning communities, etc.).

**Campus Culture**

Underlying, dominant rules, norms, and expectations which have been established over time on a particular college campus.

**Codes**

Categorized labels derived from data in qualitative research indicating an important value.

**Extracurricular Communities**

Communities respondents participate in which reflect formal organizations of shared interest, identity, or other connections (e.g. campus organizations, sports teams, etc.).

**Microaggressions**

Subtle, racially charged actions which communicate negative perceptions of a particular race or ethnicity.

**Minority College Students**

A minority is someone who is not of the dominate group. For the purpose of this study, minority will specifically refer to ethnic and racial minority students enrolled in predominately
White colleges and universities, excluding other minority groups that are evident in such settings.

**Multi-Contextual Sense of Community Index**

The Sense of Community Index-2 (SCI-2) is delivered in an electronic format that allows participants to rate their sense of community in the college campus as a whole and in two self-identified communities.

**Personal Communities**

Communities respondents participate in which reflect an informal organization of shared interest, identity, or other connections (e.g. family, peer groups, students of similar background, etc.).

**Sense of Community (SOC)**

McMillan defined sense of community as “… a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (as cited in McMillan & Chavis, 1986, p. 9). Sense of community is comprised of four dimensions: membership, influence, fulfillment of needs, and shared emotional connection (McMillan & Chavis, 1986). Within this study, relevant research has encompassed sense of community and sense of belonging. Sense of belonging is closely related to, and a component of, sense of community. Thus, when research indicated factors which influenced sense of belonging, results were interpreted as influencing sense of community as well.
Sense of Community Index-2 (SCI-2)

A quantitative measurement tool used to assess an individual’s sense of community to a particular community.
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Chapter One: Introduction

Sense of community is a prominent topic of interest among academics. An initial search of scholarly material encompassing sense of community yields millions of works. The prominence of such research validates its significance as a topic worth pursuing and understanding further and substantiates that “…the experience of sense of community does exist and that it operates as a force in human life” (McMillan & Chavis, 1986, p. 8). Several academics have dedicated significant effort in pursuing a greater understanding of sense of community and the factors which contribute to such community, McMillan and Chavis (1986) being two of the most notable. The conceptualization of sense of community and the constructs developed to measure sense of community have been defined within and applied throughout a variety of settings; however, prior to McMillan and Chavis’ (1986) seminal work, definitions and constructs did not provide significant theoretical foundation for conceptualizing sense of community. Utilizing research on behavior and group cohesiveness, McMillian and Chavis (1986) developed a theory and definition of sense of community comprised of four components: membership, influence, integration and fulfillment of needs, and shared emotional connection. Thus, McMillan defined sense of community as “… a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (as cited in McMillan & Chavis, 1986, p. 9).

McMillan and Chavis (1986) provided a succinct and encompassing definition of sense of community for which to understand such phenomenon; however, maintaining the concept of
community has been debated and contested due to its ambiguous nature and proposed unsuitability as an analytic measure within modernism (Mannarini & Fedi, 2009). In contrast, proponents have emphasized the ability of community to illuminate the emotional component of togetherness and maintain the value of small communities as providing individuals with “...high levels of interaction, common interests, identity, and shared values” found only in limited collectives (Mannarini & Fedi, 2009, pp. 211-212). Considering such perspectives, assessing an individual’s sense of community may thus be considered more complex than expected.

Attempts to understand sense of community and its benefits continue to be explored, specifically, within the college setting. Colleges and universities are communities in which individuals may become members. Further, colleges and universities provide opportunities for individuals to develop a sense of community from a variety of groups within the campus setting. Campuses are tasked with creating smaller communities and enhancing well-being for its members (Warner & Dixon, 2011); however, formal communities developed through the college or university are not solely responsible for membership in communities within the campus (Allendoerfer et al., 2012, Kirk & Lewis, 2015; Krause & Coates, 2008; Litzler & Samuelson, 2013; Spanierman et al., 2013; Yosso, Smith, Ceja, & Solórzano, 2009). As with other settings, individuals are not limited to one community and can belong to multiple overlapping communities concurrently (McMillan & Chavis, 1986). Individuals in college may establish a sense of community to the campus as a collective whole but also in other communities within the campus.

Several factors may contribute to the extent students feel a sense of community to their campus or in other communities, requiring further research; however, research focused on
comparing minority and majority student perspectives is of particular interest. Minority students can have significant differences in college experiences compared to their White counterparts’ experiences (Cokley, Hall-Clark, & Hicks, 2011; Locks, Hurtado, Bowman, & Oseguera, 2008; Museus, Nichols, & Lambert, 2008; Worthington, Navarro, Loewy, & Hart, 2008). Minority students can experience unwelcoming environments (Cokley et al., 2011; Hwang & Goto, 2008; Iwamoto & Liu, 2010; Mendoza, Hart, & Whitney, 2011; Moreno & Sanchez Banuelos, 2013; Nuñez, 2009; Yosso et al., 2009), barriers to adjustment and integration (Moreno & Sanchez Banuelos, 2013; Yosso et al., 2009), and cultural dissonance (Museus & Quaye, 2009). Such negative experiences may affect minority students’ sense of community to a greater extent compared to majority students’ sense of community. Applying McMillan and Chavis’ (1986) theory, membership, influence, integration and fulfillment of needs, and shared emotional connection may be negatively affected when minority students experience such collegiate experiences, thus contributing to lower sense of community.

**Statement of the Problem**

Minority students navigate difficult obstacles while in college which influence their adjustment (Moreno & Sanchez Banuelos, 2013; Yosso et al., 2009), resulting in diminished well-being (Cokley et al., 2011; Hwang & Goto, 2008; Iwamoto & Liu, 2010; Yosso et al., 2009). As a result, sense of community in college may be negatively affected by these experiences. Additionally, disparities persist between minority and White student graduation rates (Shapiro et al., 2017), requiring further inquiry into potential reasons for these disparities. Assessing such issues through a sense of community framework allows for a deeper understanding of the interconnected nature these components have on minority students’ lives,
providing an avenue through which greater comprehension of minority students’ experiences can illuminate the factors which contribute to or hinder sense of community, potentially contributing to increased adjustment, well-being, and academic success.

**Purpose of the Study**

The primary purpose of this study was two-fold: to explore where minority students in college established a sense of community at predominantly White universities and to explore the effects of established sense of community on academic achievement; such results were compared with majority student perspectives and results in which similarities and differences were analyzed. Based on these overarching questions, additional questions emerged:

- Do minority students have lower Sense of Community for Campus Community compared to non-minority students?
- Do minority students report lower Membership Scores for Campus Community compared to non-minority students?
- Is there a relationship between Sense of Community and self-reported Grade Point Average?
- Is there a relationship between Sense of Community for Campus Community and other communities?
- Does minority background influence Sense of Community for Campus Community?
- Do participants in this study define community similarly to McMillan and Chavis’ (1986) theory and definition?
- Which factors contribute to or hinder sense of community?
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• What are participants’ perceptions regarding sense of community’s influence on academic achievement?

These questions were also explored within this study.

Significance of the Study

Research focused on minority students’ sense of community is lacking, therefore, further inquiry into the subject is warranted. This research has contributed to the literature by assessing minority students’ sense of community in college, utilizing the Sense of Community Index-2, and gaining individual perspectives of community through qualitative assessment. This research has practical applications for colleges and universities by understanding which factors may contribute to or hinder sense of community and the benefits derived from establishing a sense of community, as well as understanding the extent minority students feel a sense of community in college. Colleges and universities may be able to adjust their campuses to provide minority students with the necessary environments to establish a greater sense of community. Improving the sense of community minority students establish while in college may thus contribute to their adjustment and well-being.

Chapter Two: Literature Review

College can be a challenging time for most students; however, it can be especially challenging for minority students. Research indicates minority students can have significant differences in college experiences compared to their White counterparts’ experiences, often participating in environments perceived as unwelcoming, which create barriers to adjustment and integration for minority students within the college or university, as well as health implications. However, research also indicates minority students receive support through a variety of
mechanisms which contribute to their adjustment and success while in college. The minority student college experience is complex and diverse, warranting greater understanding. Of particular importance, however, is the influence such collegiate experiences may have on minority students’ sense of community while in college. Understanding minority students’ collegiate experiences can provide valuable insight into how sense of community may be understood and actualized for such students, compared to their White counterparts. Accordingly, the present study has sought to establish the connection between minority students’ collegiate experiences and their sense of community, discussing: minority students’ sense of community in the campus, minority students’ sense of community in additional communities within the campus, factors contributing to or hindering sense of community, and sense of community’s influence on academic achievement.

**Minority Student College Experience**

**Campus culture.** Minority students experience unwelcoming campus cultures while in college through discriminatory experiences (Cokley et al., 2011; Hwang & Goto, 2008; Iwamoto & Liu, 2010; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Nuñez, 2009; Yosso et al., 2009). Discriminatory experiences can be enacted through a variety of mechanisms and can be perpetrated by various entities, both subtly and overtly, such as through microaggressions and exclusion (Cokley et al., 2011; Hwang & Goto, 2008; Iwamoto & Liu, 2010; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Nuñez, 2009; Yosso et al., 2009). Compared to their White counterparts, minority students have been more likely to report perceived racial discrimination (Cokley et al., 2011). Consequently, varying levels of satisfaction with campus racial climate exist between minority and majority students, Black students reporting the lowest
satisfaction (Asian and Latino/a students’ satisfaction scores not far behind) and White students reporting the highest satisfaction (Museus et al., 2008). Experiencing racial discrimination may thus contribute to the varying levels of campus racial climate satisfaction. Further, minority and majority students vary in their perceptions of general campus community (GCC) and racial-ethnic campus community (RECC), White students reporting higher positive perceptions for both GCC and RECC and minority students reporting more negative perceptions of both GCC and RECC (Worthington et al., 2008). Such differences may be attributed to the discriminatory practices minority students experience, which majority students may not experience (Worthington et al., 2008), and the awareness or lack of awareness to such racial tension (Locks et al., 2008). Since discrimination can create unwelcoming environments, it is plausible that perceptions of campus community may be influenced by such experiences.

**Adjustment to college.** Adjusting to the college environment can prove to be challenging for the average student; however, campuses exhibiting unwelcoming cultures can create additional challenges for minority students. Minority students can have difficulty adjusting to college in their first year and can struggle to belong even when there has been opportunity to meet many people, although such concerns about belonging have been expressed as common and understood as temporary (Walton & Cohen, 2011). Sense of belonging and adjustment may thus improve with time, simply accounting for minority students’ exposure to a new environment. Still, discriminatory experiences can pose additional barriers to integration for minority students by creating a sense of rejection towards integration, creating feelings of self-doubt regarding academic merit, thus, invalidating feelings of academic success (Yosso et al., 2009), and creating
environments in which minority students experience discomfort attributed to their appearances (Moreno & Sanchez Banuelos, 2013).

Further, cultural dissonance can contribute to minority students’ adjustment difficulty when students leave culturally congruent environments with members of similar background for environments with dissimilar cultural background (Museus & Quaye, 2009). Considering cultural dissonance, some difficulty to adjustment may be attributed to discriminatory practices which demean ethnic identity, dismiss cultural knowledge, and reflect institutional inaction to address such issues (Yosso et al., 2009), since cultural dissonance can be attributed to the invalidation of cultural heritage (Museus & Quaye, 2009). However, integration may not be defined so narrowly as to suggest all minority students integrate in the same manner. The amount of cultural dissonance experienced can be higher or lower for particular minority students depending on the cultural backgrounds they come from (Museus & Quaye, 2009). Experiences such as these pose a challenge to integration since the validity of students’ belonging within the college system is questioned by others and individuals themselves. These results suggest discriminatory practices can take a toll on minority students’ integration academically and personally, casting doubt on students’ abilities and being reminded of the differences separating minority and majority students.

Unwelcoming campus cultures attributed to discrimination, as well as other race-related issues, may hinder minority student adjustment and integration in college; however, minority students also have avenues through which their adjustment can be eased, further contributing to success. Institutional support for minority students can contribute to adjustment and success while in college (Cole & Espinoza, 2008; Museus, 2011; Museus & Ravello, 2010). Institutional
support inclusive of humanizing educational experiences, demonstrated through the care and investment of educators (Cole & Espinoza, 2008; Museus, 2011; Museus & Ravello, 2010); targeted support (Museus, 2011; Museus & Ravello, 2010); and linking students with support networks (Museus, 2011), provides minority students with the support and resources necessary to ease their adjustment while in college which may further contribute to success. Institutional support and commitment can provide significant benefits for minority students; however, not all institutions provide supportive environments for minority students’ successful adjustment to college, requiring different avenues through which minority students can receive such support.

Minority students also receive support from community gained through various culturally relevant organizations on campus (Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus & Quaye, 2009) and family of origin (Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus & Quaye, 2009). Such communities provide minority students with encouragement, reasons for persistence and motivation (Moreno & Sanchez Banuelos, 2013), unconditional support, bonding opportunities with similar individuals, motivation to succeed academically and socially, family acceptance, love, motivation, encouragement (Mendoza et al., 2011), cultural validation of heritage and connection to cultures of origin (Museus & Quaye, 2009), and with “sources of cultural familiarity, vehicles for cultural expression and advocacy, and venues for cultural validation” (Museus, 2008, p. 576). Although these communities provide support, not all minority students may participate. For instance, some minority students may choose not to participate in ethnic organizations as to not segregate themselves from the rest of the campus community (Museus & Quaye, 2009).
A variety of factors influence minority students’ ability to adjust and succeed in college and may be more complicated than expected. Understanding how minority students adjust to and succeed within the college setting, and which factors support or hinder integration, is a pressing issue as disparities in graduation rates remain among minorities. Recent overall graduation rates reported for students beginning their postsecondary education in fall 2010, with six-year completion rates, revealed a 24 percentage point gap between Black (38%) and White (62%) students, as well as a 16 percentage point gap between Hispanic (45.8%) and White students (62%) (Shapiro et al., 2017). Asian students did have the highest graduation completion rates (63.2%), however (Shapiro et al., 2017). Further inquiry is merited to more fully understand how adjustment to college may contribute to academic success and influence completion rates among minority students.

**Well-Being.** Environments which support minority students can contribute positively to their experiences in college; however, experiences which induce stress can have serious health implications for minority students, specifically stress related to race (Cokley et al., 2011; Cokley, McClain, Enciso, & Martinez, 2013; Hwang & Goto, 2008; Yoon & Lau, 2008; Yosso et al., 2009). Discriminatory experiences have grave health implications for minority students, contributing to emotional distress (Cokley et al., 2011), anxiety (Hwang & Goto, 2008; Yosso et al., 2009), higher psychological stress, higher risk of depression, and higher suicidal ideation, younger students being at greater risk for such distress (Hwang & Goto, 2008). Trait measures of negative affect such as anger, nervousness, and sadness are also attributed to perceived racism experienced by minority populations outside the college environment (Brondolo, et al., 2008), illuminating the ability of such experiences to transcend into other aspects of minorities’ lives.
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(Yosso et al., 2009). Interestingly, mental health issues induced by discrimination can vary among different minority populations and to different extents (Cokley et al., 2011; Hwang & Goto, 2008). Discriminatory experiences are not solely responsible for race-related stress, however. Expectations, set by others and the self, can contribute to minority students’ mental health negatively (Yoon & Lau, 2008), as well as minority status (Cokley et al., 2013; Yosso et al., 2009) and imposter feelings (Cokley et al., 2013). Research has indicated the negative influence discriminatory experiences and minority student expectations have on mental well-being. Further research is warranted to ensure minority students are operating within environments which support their health.

**Sense of Community in College**

**Established communities.** Students become involved in a variety of communities while in college which contribute to their sense of belonging and sense of community, inclusive of academic (Allendoerfer et al., 2012; Brown & Burdsal, 2012; Krause & Coates, 2008; Spanierman et al., 2013) and non-academic communities (Allendoerfer et al., 2012; Krause & Coates, 2008; Kirk & Lewis, 2015; Soria, Troisi, & Stebleton, 2012; Warner & Dixon, 2011). Within academic communities, college allows for participation in both formal and informal learning communities on campus (Krause & Coates, 2008; Spanierman et al., 2013), comprised of the general learning environment (Allendoerfer et al., 2012; Krause & Coates, 2008) and intentional programs (e.g. living learning communities), aimed at providing academic and social support (Brown & Burdsal, 2012; Spanierman et al., 2013). Within non-academic communities, students find sense of belonging and community in extracurricular (Allendoerfer et al., 2012;
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Krause & Coates, 2008; Soria et al., 2012; Warner & Dixon, 2008) and personal communities (Allendoerfer et al., 2012; Kirk & Lewis, 2015).

Extracurricular communities can include participation in religious organization (including religious activities) (Allendoerfer et al., 2012), clubs (Allendoerfer et al., 2012; Krause & Coates, 2008), societies (Krause & Coates, 2008), trade service organizations, community service organizations (Allendoerfer et al., 2012), and athletic teams (Warner & Dixon, 2008). Personal communities, however, can include family, friends (Allendoerfer et al., 2012), and other informal communities with shared connections (e.g. LGBT identity) (Kirk & Lewis, 2015). Participating in academic and non-academic communities within the college setting can benefit students by contributing to their belonging and sense of community; however, both academic and non-academic communities may contribute to students’ sense of community within particular communities but may not contribute to overall sense of community to the campus (Spanierman et al., 2013; Warner & Dixon, 2011). Lower rates of connection to the campus community has important implications, especially when assessed alongside other communities, warranting further research which seeks to understand how communities within the campus may affect overall sense of community to the college campus.

Contributions and hindrances. Sense of community can be derived from a variety of factors, including institutional support (Boehm & Moin, 2014; Hausmann, Ye, Schofield, & Woods, 2009; Krause & Coates, 2008; Warner & Dixon, 2011) and interaction with peers (Allendoerfer et al., 2012; Boehm & Moin, 2014; Dawson, 2008; Locks et al., 2008; Pittman & Richmond, 2008; Soria et al., 2012; Spanierman et al., 2013). Institutional support can demonstrate a sense of care and commitment to students’ collegiate success (Hausmann et al.,
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2009; Krause & Coates, 2008; Warner & Dixon, 2011); however, methods utilized to support students may influence minority and majority students’ sense of community and belonging differently (Hausmann et al., 2009); therefore, attempts to improve sense of community through such means require greater understanding (Hausmann et al., 2009). Applying McMillan and Chavis’ (1986) theory and definition of sense of community, institutional support may demonstrate that students belong in college, validating their membership, when intentional efforts are made to support their academic success and university faculty and staff demonstrate intentional connections with students; additionally, it may provide integration and fulfillment of needs when students receive the necessary academic and social support to thrive, thus contributing to students’ sense of community.

In comparison, peer interactions provide students with quality friendships (Pittman & Richmond, 2008), academic and social support (Dawson, 2008; Spanierman et al., 2013), diverse interactions (Locks et al., 2008), and opportunities to connect through service (Boehm & Moin, 2014; Soria et al., 2012). Peer interactions may provide students with a sense of belonging, validating their membership, by gaining quality friendships and opportunities to connect through service opportunities. Peer interactions may also provide integration and fulfillment of needs through such friendships, diverse peer interactions, and the necessary academic and social support to thrive, further contributing to sense of community. In contrast, sense of community can be hindered when the factors which contribute to community are not met, such as lack of institutional support (e.g. inequitable treatment from university) (Warner & Dixon, 2011); however, additional issues can also hinder sense of community, such as racial tension and lack of precollege diverse peer interactions (Locks et al., 2008), as well as a lack of opportunity to
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connect to the campus (Kirk & Lewis, 2015). Assessing contributing factors and hindrances provide greater understanding of how individuals establish a sense of community and illuminate the variety of issues expressed.

**Benefits.** Certain communities can provide specific benefits for its members, aside from the general benefits associated with establishing a sense of community (e.g. establishing membership, integration and fulfillment of need, opportunities for influence, and shared emotional connection). Establishing a sense of community while in college can lead to further academic success (Allendoerfer et al., 2012; Brown & Burdsal, 2012; Walton & Cohen, 2011), persistence (Brown & Burdsal, 2012; Hausmann et al., 2009; Morrow & Ackermann, 2012), and improvements in well-being (Allendoerfer et al., 2012; Kirk & Lewis, 2015; Pittman & Richmond, 2008). Improvements in well-being can include lowering internal and external problem behaviors (Pittman & Richmond, 2008), greater positive affect (Allendoerfer et al., 2012; Kirk & Lewis, 2015), greater self-efficacy and life satisfaction (Kirk & Lewis, 2015), and scholastic competence and positive perceptions of self (Pittman & Richmond, 2008). Positive associations with sense of community and belonging validate the significance of ensuring students establish a sense of community while in college. Understanding students’ sense of community within certain communities, and the factors which contribute to or hinder students’ potential to establish a sense of community, can provide valuable insight for individuals seeking to improve sense of community in college.

**Minority Students’ Sense of Community in College**

Research focused on understanding minority students’ sense of community in college is limited. This literature review did not encompass research measuring minority students’ four-
fold sense of community in college, specifically; rather, research focused on understanding sense of belonging and membership, components of sense of community. Additionally, some research produced responses from participants which reflected such components of sense of community as well; therefore, research included in this review was interpreted as reflecting sense of community when these components were discussed. Understanding minority students’ sense of community in college, in comparison to the average student’s sense of community in college, was fitting for this review as the research produced from the following study focused on measuring group differences between minority and non-minority students. Further, understanding minority students’ sense of community in college provides a foundation for interpreting the influence minority students’ experiences in college may have on their sense of community.

Established communities. Minority students become involved in a variety of communities while in college which contribute to their sense of belonging and sense of community, inclusive of academic (Litzler & Samuelson, 2013; Yosso et al., 2009) and non-academic communities (Litzler & Samuelson, 2013; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus & Quaye, 2009; Yosso et al., 2009). Within academic communities, minority students participate in formal and informal academic communities, comprised of the general learning environment, such as classes and labs, and intentional academic programs and communities (Litzler & Samuelson, 2013; Yosso et al., 2009). Importantly, minority students find value in academic counter spaces- environments which validate cultural knowledge- by providing minority students with safe environments to engage in the academic community (Yosso et al., 2009); thus, academic communities may provide
minority students with different or additional benefits, compared to non-minority students. Within non-academic communities, minority students find sense of belonging and community in extracurricular (Litzler & Samuelson, 2013; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus & Quaye, 2009; Yosso et al., 2009) and personal communities (Yosso et al., 2009).

Extracurricular communities can include participation in racially- and ethnically-focused organizations (Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus & Quaye, 2009), professional societies (Litzler & Samuelson, 2013), sports teams (Litzler & Samuelson, 2013; Yosso et al., 2009), and non-academic support programs (e.g. Women’s Center) (Litzler & Samuelson, 2013). Racially- and ethnically-focused organizations appear to be valuable communities in which minority students participate. Such communities can provide minority students with a sense of ethnic pride (Moreno & Sanchez Banuelos, 2013), validation of cultural heritage (Museus & Quaye, 2009), strong networks of support (Mendoza et al., 2011), and connection to the larger campus (Moreno & Sanchez Banuelos, 2013). Personal communities, however, can include ethnic peers which can provide minority students with a sense of family where culture is reaffirmed (Yosso et al., 2009). In contrast to the average student, minority students may receive benefits closely associated to their racial and ethnic identities by establishing a sense of community within various academic and non-academic communities in college.

**Contributions and hindrances.** Sense of community can be derived from a variety of factors for minority students, including supportive systems (Cerezo & Chang, 2013; Litzler & Samuelson, 2013; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus, 2008;
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Museus, 2011; Museus & Quaye, 2009; Nuñez, 2009; Przymus, 2011; Strayhorn, 2008; Yosso et al., 2009), peer interactions (Cerezo & Chang, 2013; Litzler & Samuelson, 2013; Yosso et al., 2009), and diversity on campus (Museus & Quaye, 2009; Nuñez, 2009; Przymus, 2011; Strayhorn, 2008). Supportive systems encompass institutions which demonstrate care and interest from faculty and staff (Nuñez, 2009; Przymus, 2011), provide support and encouragement (Litzler & Samuelson, 2013; Museus, 2011), and include environments which appreciate and support minority student cultural identity (Cerezo & Chang, 2013; Moreno & Sanchez Banuelos, 2013; Museus & Quaye, 2009; Yosso et al., 2009); and extracurricular (Litzler & Samuelson, 2013) and personal communities (Mendoza et al., 2011; Museus & Quaye, 2009; Yosso et al., 2009) which provide cultural connection (Litzler & Samuelson, 2013; Museus, 2008; Mendoza et al., 2011) and support of cultural identity (Mendoza et al., 2011), cultural validation (Museus, 2008; Museus & Quaye, 2009), social support (Museus, 2008; Litzler & Samuelson, 2013), academic support (Litzler & Samuelson, 2013), emotional support (Museus, 2008), peer support and motivation (Moreno & Sanchez Banuelos, 2013), and opportunities to influence community (Litzler & Samuelson, 2013; Yosso et al., 2009).

Supportive systems may fulfill minority students’ needs by receiving various supportive mechanisms to succeed in college. In conjunction, membership may be validated by internalizing such support as evidence of minority students’ belonging. In contrast to the average student, reaffirming minority students’ culture provides a unique opportunity to validate minority students’ belonging in college.

Peer interactions can provide minority students with opportunities to meet and develop strong bonds with friends (Litzler & Samuelson, 2013), receive academic support (Litzler &
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Interacting with other minority peers can also contribute to emotional and psychological integration in college (Cerezo & Chang, 2013). Peer interactions may fulfill minority students’ needs by receiving the necessary support to succeed in college, reaffirming their belonging within the community by interacting with similar peers, and building a shared emotional connection by developing peer friendships.

Greater diversity, among instructors and students, can provide minority students with an opportunity to feel more connected to the campus, feel more comfortable on campus, and potentially provide an opportunity for diverse faculty to serve as mentors for minority students (Przymus, 2011). Greater diversity in college may contribute to minority students’ belonging by participating in an environment with individuals of similar background, validating their membership on campus. Minority students experience negative campus environments which question their belonging in college; however, diverse campus communities and experiences can potentially counteract the negative impact of such experiences (Nuñez, 2009). As such, sense of community may be hindered when negative campus climates are prevalent in the lives of minority students (Museus, 2008; Nuñez, 2009; Walton & Cohen, 2011; Yosso et al., 2009) and a lack of diversity exists (Przymus, 2011; Yosso et al., 2009). Additionally, sense of community can be hindered through lack of institutional support (Nuñez, 2009; Yosso et al., 2009), cultural dissonance within college and a pressure to conform to dominant culture (Museus & Quaye, 2009), and a lack of opportunity to connect to the campus (Przymus, 2011).

The connection between minority students’ experiences in college and their sense of community can be understood by assessing the negative influences often faced by minority
students. Discriminatory experiences (Cokley et al., 2011; Hwang & Goto, 2008; Iwamoto & Liu, 2010; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Nuñez, 2009; Yosso et al., 2009) may contribute to lower campus satisfaction (Museus et al., 2008) and negative perceptions of community (Worthington et al., 2008), which affect adjustment (Moreno & Sanchez Banuelos, 2013; Yosso et al., 2009) and well-being (Cokley et al., 2011; Cokley et al., 2013; Hwang & Goto, 2008; Yoon & Lau, 2008; Yosso et al., 2009) while in college. Such negative experiences and outcomes may lower sense of community as feelings of membership may be lowered through the invalidation of minority students’ belonging, internalized through discriminatory experiences; these experiences may reflect communities which do not appreciate nor support minority students’ cultural identities (Cerezo & Chang, 2013; Moreno & Sanchez Banuelos, 2013; Museus & Quaye, 2009; Yosso et al., 2009). Race-related discriminatory issues in college may not affect non-minority students as they affect minority students; therefore, it is plausible that, given such experiences, minority students may feel less sense of community in college compared to their White counterparts.

**Benefits.** Establishing a sense of community while in college has several benefits for minority students. Sense of community may contribute to academic achievement (Cerezo & Chang, 2013; Walton & Cohen, 2011), social and academic resilience (Mendoza et al., 2011), persistence in college (Cerezo & Chang, 2013; Hausmann et al., 2009; Litzler & Samuelson, 2013; Museus & Quaye, 2009; Strayhorn, 2008), community leadership (Moreno & Sanchez Banuelos, 2013), and improved health and well-being (Walton & Cohen, 2011). Accordingly, positive associations with sense of community and belonging validate the significance of ensuring minority students establish a sense of community while in college. Understanding
minority students’ sense of community within certain communities, and the factors which contribute to or hinder their sense of community, can provide valuable insight for individuals seeking to improve sense of community in college within this population. The following study has been conducted to further the knowledge of sense of community research within the college context, focusing especially on minority student experiences, to understand where sense of community is established and the value having sense of community provides.

Chapter Three: Methods

Design

This study utilized a mixed-method research design within a pragmatic philosophical framework, including both inductive and deductive reasoning. Quantitative and qualitative methods of observation were employed to understand minority and majority student perspectives from two predominantly White universities: Concordia University-Portland and Portland State University. Research was conducted in two phases. In phase one of the study, quantitative data were collected through the distribution of a multi-contextual Sense of Community Index-2 (SCI-2) where participants reported the amount of community they felt within a variety of communities: the college campus (minimum) and two self-identified communities (maximum). Demographic information was also collected in phase one. In phase two of the study, qualitative data were collected through the distribution of a short, open-ended questionnaire to a subset of the participants from phase one of the study. The nature of this mixed design provided the necessary measures to explore the relationship between sense of community, its influence on academic achievement, and the similarities and differences among minority and majority students’ data.
Participants

The multi-contextual Sense of Community Index-2 (SCI-2) was administered to 83 students, with a completion rate of 65%, gathered from Concordia University-Portland and Portland State University, including both undergraduate and graduate students. Participants comprised a variety of racial and ethnic backgrounds (African American/Black 9.6%, Asian/Pacific Islander/Hawaiian 14.5%, Hispanic/Latino(a) 14.5%, Caucasian 27.7%, Two or more races 22.9%) and genders (male 20.5%, female 68.7%, Genderqueer/Gender Non-Conforming 3.6%, and Different Identity 1.2%). Non-probability sampling was utilized, coupled with quota sampling, to recruit underrepresented minority groups and to gather a sample size with significant power for comparisons between the varying demographic groups (VanVoorhis & Morgan, 2007). Targeted enrollment for this study was 240 participants; however, this sample was not obtained, potentially due to recruitment efforts exercised at the end of the academic semester. The population from which the sample was gathered totaled 33,135 potential participants (Concordia University-Portland and Portland State University, combined); therefore, total institutional response was less than .2%, a very small sample (About Concordia, n.d.; Snapshot of Portland State, n.d.). The qualitative questionnaire was administered to eight students, with a completion rate of 37.5%, gathered from Concordia University-Portland and Portland State University, including both undergraduate and graduate students. Similarly, participants comprised a variety of racial and ethnic backgrounds (Hispanic/Latino 33.3%, Asian/Pacific Islander/Hawaiian 33.3%, Caucasian 33.3%) and genders (male 33.3%, female 66.6%).
Conceptualization of Key Constructs

Mixed-Method and Pragmatism. Mixed-Methods research combines both quantitative and qualitative research methodologies within a pragmatic framework emphasizing a logic of inquiry encompassing inductive, deductive, and abductive approaches (Johnson & Onwuegbuzie, 2004). A pragmatic framework within mixed-methods research emphasizes a combination of procedures for best answering important research questions (Johnson & Onwuegbuzie, 2004). Quantitative and qualitative research methodologies, employed individually, remain limited in certain aspects (Johnson & Onwuegbuzie, 2004); however, the pluralistic nature of a mixed-method research design allows for the possibility of producing complementary strengths from each methodology and producing weakness which do not overlap (as cited in Johnson & Onwuegbuzie, 2004), thus resulting in a superior product compared to studies utilizing one method of inquiry (Johnson & Onwuegbuzie, 2004). Utilizing a mixed-method approach allowed me to develop a study with the potential to produce generalizable results and provided an avenue for collecting personal narratives which contributed to deeper understanding of individual perspectives. The mixed-method approach allowed me to combine several procedures to best answer the research questions developed.

Sense of Community. For the purposes of this study, sense of community theory has been adopted from McMillan and Chavis’s (1986) seminal work defining sense of community and the factors which contribute to an individual’s sense of community. McMillan defined sense of community as “… a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together” (as cited in McMillan & Chavis, 1986, p. 9). McMillan and Chavis
proposed four dimensions which determined sense of community: membership (“feeling of belonging or of sharing a sense of personal relatedness”), influence (“a sense of mattering, of making a difference to a group and of the group mattering to its members”), integration and fulfillment of needs (“feeling that members’ needs will be met by the resources received through their membership in the group”), and shared emotional connection (“the commitment and belief that members have shared and will share history, common places, time together, and similar experiences”) (p. 9). Additionally, several attributes comprise each dimension, including:

**Membership:** Boundaries, emotional safety, sense of belonging and identification, personal investment, and common symbol system. These attributes work together and contribute to a sense of who is part of the community and who is not (McMillan & Chavis, 1986, p. 11).

**Influence:** (1) Members are more attracted to a community in which they feel that they are influential; (2) There is a significant positive relationship between cohesiveness and a community’s influence on its members to conform. Thus, both conformity and community influence on members indicate the strength of the bond; (3) The pressure for conformity and uniformity comes from the needs of the individual and the community for consensual validation. Thus, conformity serves as a force for closeness as well as an indicator of cohesiveness; and (4) Influence of a member on the community and influence of the community on a member operate concurrently, and one might expect to see the force of both operating simultaneously in a tightly knit community (McMillan & Chavis, 1986, p. 12).
Integration and fulfillment of needs: (1) Reinforcement and need fulfillment is a primary function of a strong community; (2) Some of the rewards that are effective reinforcers of communities are status of membership, success of the community, and competence or capabilities of other members; (3) There are many other undocumented needs that communities fill, but individual values are the source of these needs. The extent to which individual values are shared among community members will determine the ability of a community to organize and prioritize its need-fulfillment activities; and (4) A strong community is able to fit people together so that people meet others’ needs while they meet their own (McMillan & Chavis, 1986, p. 13).

Shared emotional connection: (1) The more people interact, the more likely they are to become close (contact hypothesis); (2) The more positive the experience and the relationships, the greater the bond. Success facilitates cohesion (quality of interaction); (3) If the interaction is ambiguous and the community’s tasks are left unresolved, group cohesiveness will be inhibited (closure to events); (4) The more important the shared event is to those involved, the greater the community bond (shared valent event hypothesis); (5) Investment determines the importance to the member of the community’s history and current status (investment); (6) Reward or humiliation in the presence of community has a significant impact on attractiveness (or adverseness) (effect of honor and humiliation on community members); and (7) spiritual bond (McMillan & Chavis, 1986, p. 14).

McMillan and Chavis’ (1986) seminal research has provided a comprehensive understanding of the many factors which contribute to sense of community.
Operationalization

**Demographics.** Demographic information regarding gender identity (Male, Female, Trans Male/Trans Man, Trans Female/Trans Woman, Genderqueer/Gender Non-Conforming, Different Identity, prefer not to answer), university attended (Concordia University-Portland, Portland State University), racial and ethnic background (African American/Black, Asian/Pacific Islander/Hawaiian, Hispanic/Latino(a), Caucasian, Two or More, Other, Prefer not to answer), year in school (Freshman, Sophomore, Junior, Senior (including 5th year and beyond), Graduate Student), grade point average, and age was collected.

**Sense of Community Index-2 (SCI-2).** The SCI-2 is comprised of an initial question gauging the importance individuals attribute to a specific community and 24 questions across four sub-scales measuring reinforcement of needs, membership, influence, and shared emotional connection within the identified community. The initial question, “How important is it to you to feel a sense of community with other community members?” is provided as a validating measure used to interpret data (Chavis et al., 2008, p. 3). For the initial question, participants could choose between six levels of agreement, including: (1) prefer not to be a part of this community, (2) not important at all, (3) not very important, (4) somewhat important, (5) important, and (6) very important. Within the sub-scales, participants could choose between four levels of agreement, including: (0) not at all, (1) somewhat, (2) mostly, and (3) completely. For each question, participants were asked how well each statement represented how they felt about the identified community(ies). The questions comprising each sub-scale are:

- **Reinforcement of Needs:** (1) I get important needs of mine met because I am part of this community; (2) Community members and I value the same things; (3) This community has
been successful in getting the needs of its members met; (4) Being a member of this community makes me feel good; (5) When I have a problem, I can talk about it with members of this community; and (6) People in this community have similar needs, priorities, and goals (Chavis et al., 2008, p. 1).

*Membership:* (1) I can trust people in this community; (2) I can recognize most of the members of this community; (3) Most community members know me; (4) This community has symbols and expressions of membership such as clothes, signs, art, architecture, logos, landmarks, and flags that people can recognize; (5) I put a lot of time and effort into being part of this community; and (6) Being a member of this community is a part of my identity (Chavis et al., 2008, pp. 1-2).

*Influence:* (1) Fitting into this community is important to me; (2) This community can influence other communities; (3) I care about what other community members think of me; (4) I have influence over what this community is like; (5) If there is a problem in this community, members can get it solved; and (6) this community has good leaders (Chavis et al., 2008, p. 2).

*Shared Emotional Connection:* (1) It is very important to me to be a part of this community; (2) I am with other community members a lot and enjoy being with them; (3) I expect to be a part of this community for a long time; (4) Members of this community have shared important events together, such as holidays, celebrations, or disasters; (5) I feel hopeful about the future of this community; and (6) Members of this community care about each other (Chavis et al., 2008, p. 2).
The SCI-2 is a revised version of the initial SCI with adjustments better reflecting all the attributes of McMillan and Chavis’ (1986) sense of community theory (Chavis et al., 2008). The SCI-2 has not been tested intensively for validity, but Abfalter, Zaglia, and Mueller (2012) suggested that the SCI-2’s construct validity represented the four dimensions of sense of community considerably higher than the original sense of community index. In addition, Abfalter et al. reported a more reliable application of measures across intercultural settings. The SCI-2 has proven to be reliable with an alpha coefficient of .94 (Chavis et al., 2008); however, reliability of scales may vary depending on particular samples (Pallant, 2016), so internal consistency was measured for this study, yielding an alpha coefficient of .93. Additionally, each sub-scale within the SCI-2 proved to be reliable with alpha coefficients of .76 to .86 (Chavis et al., 2008). For this study, reliability for each sub-scale within the SCI-2 yielded alpha coefficients of .85, .80, .80, and .80 for reinforcement of needs, membership, influence, and shared emotional connection, respectively.

**Qualitative questionnaire.** Phase two of the study consisted of six open-ended questions, providing greater understanding of reported scores on the SCI-2. Phase one of the study contributed to the research by indicating the level of community established within a variety of communities. Phase two, however, sought to provide individual perspectives on the factors contributing to and hindering such sense of community, as well as how sense of community may have influenced academic achievement. Furthermore, these questions helped conceptualize personal definitions of community, which could be compared to McMillan and Chavis’ (1986) sense of community definition and theory. Through such questions, a variety of themes could be assessed to provide a more holistic understanding of respondent data. The six,
open-ended questions in phase two include: (1) What is your definition of an established sense of community; (2) You indicated that you felt the highest sense of community within_____. What has led you to feel a greater sense of community within this community; (3) You also indicated that you felt the lowest sense of community within_____. What might the former community have that the latter might not offer; (4) Reflecting on your previous academic achievements and success in college, in what ways has establishing a sense of community within college (any community in general), or lack thereof, influenced your academic achievement, if any; (5) Do you believe that having a strong sense of community in college (any community in general) would contribute to greater academic achievement? Why or why not; and (6) How might a low sense of community to the campus (whole) affect your academic achievement?

Data Collection and Analysis

Data collection. In phase one of the study, demographic information and the multi-contextual SCI-2 were constructed within an online questionnaire developed through Qualtrics, an electronic survey distribution program. Participants were required to consent to phase one of the study before proceeding to the data collection component of the questionnaire. The consent form listed the purpose of the study, the potential risks and benefits, an understanding of confidentiality and withdrawal from the study, and an opportunity to contact myself, the primary researcher, with any questions. If participants consented to phase one of the study, they were then able to proceed. Participants recorded their demographic information and completed the SCI-2 for the campus community. Participants then had the option to complete up to two additional SCI-2s for self-identified communities in which they participated. Communities reported were rather broad, so I gathered the closest possible interpretation of each community
presented. At the conclusion of phase one, participants were asked if they were interested in participating in phase two of the study. If participants were interested in being considered for phase two of the study, they were redirected to an external form where they noted their email addresses, providing greater security and confidentiality by not linking personally identifiable information within the same questionnaire. The questionnaires were self-administered and were conducted individually.

In phase one of the study, participants were recruited through a variety of mechanisms. I conducted face-to-face recruitment; created flyers and posed them in areas throughout campus; shared my study on social media (public post sections of Concordia University-Portland and Portland State University Facebook pages); and enlisted the support of faculty and students to spread awareness of my study among their students (classes and departments), friends (residence hall team members and general campus), and organization members (culturally-specific organizations on campus). Most of my recruitment efforts focused on Concordia University-Portland as it was the most convenient setting. Potential participants were provided with a brief background on the study, eligibility requirements, and an anonymous link and QR code which directed students to the phase one questionnaire, beginning with a consent form.

In phase two of the study, the six open-ended questions were constructed in an online questionnaire developed through Qualtrics. Participants were required to consent to phase two of the study before proceeding to the data collection component of the questionnaire. The consent form listed the purpose of the study, the potential risks and benefits, an understanding of confidentiality and withdrawal from the study, and an opportunity to contact myself, the primary researcher, with any questions. Participating in phase two of the study would directly link
individuals’ responses to phase one, contributing to a potential lowering of confidentiality, so participants were made aware of the additional risk. If participants consented to phase two of the study, they were then able to proceed. Participants recorded their responses to the six open-ended questions. At the conclusion of phase two, participants were redirected to an external form where they noted their email addresses, linking their responses to phase one data. The questionnaires were self-administered and were conducted individually.

In phase two of the study, a subset of participants from phase one was recruited. Phase one participants whom expressed interest in participating in phase two of the study were contacted via the email they provided. I sent an initial email asking respondents to confirm if they were still interested in participating in phase two of the study. Respondents that were still interested received a second email advising them on the two communities they reported the highest and lowest sense of community, as well as a link to the phase two questionnaire. If I was unsure of the meaning attributed to any community listed, participants were asked to provide clarity on the self-identified communities they reported; however, no participants provided such clarity, so I gathered the closest possible interpretation of each community presented.

Data storage. Several measures have been employed to ensure data gathered would not be misused. Data have been stored on a laptop within an encrypted folder accessible only by me, the primary researcher, limiting access to confidential information. Although such precautions have been taken, breach in confidentiality is always an issue and should be acknowledged. In case of a breach of confidentiality, data gathered in phase one and phase two pose a lower risk of linking individuals to their responses as external surveys have been utilized to collect personally identifiable information (emails); however, there is an elevated risk for participants included in
phase two of the study, due to linking participant responses from phase one responses to phase two responses. Additionally, the data collection software used for this study (Qualtrics) gathers the IP address of individuals filling out both the quantitative and qualitative components of the study.

**Data processing and analysis of procedures.** Prior to conducting the analysis, a codebook was developed to define key variables, assign values, and determine levels of measurement for the quantitative data. If new variables were created during the analysis, the codebook was updated accordingly. Data were gathered from Qualtrics and exported onto an Excel file when phase one was complete. I added values determined in the codebook to the spreadsheet and removed non-relevant information from the file (e.g. time of completion). Once all variables were labeled, data were imported into IBM’s SPSS software package. IBM’s SPSS was utilized to run a variety of quantitative analysis measuring relationships among variables and measuring relationships between groups; however, to prepare for analysis, data were first checked for errors and manipulated, as well as checked for statistical assumptions associated with each test. The manipulation of data provided new variables necessary for analysis, including: recoding raw data to fit the values assigned in the SCI-2 (responses assigned values through Qualtrics from 1 - 4 to 0 - 3), dummy-coding racial and ethnic background, categorizing self-identified communities, and calculating total sense of community scores and sub-scale scores for the various communities reported.

MAXQDA (qualitative analysis software) was utilized to analyze responses in phase two of the study. Data gathered in Qualtrics were imported into MAXQDA and analyzed for emergent themes. Codes were developed inductively to depict the trends reflected throughout the data.
Themes were then analyzed and assigned value, leading to 15 codes, which encompassed components of sense of community (although sense of community components themselves were also coded). Emergent themes were then categorized within McMillan and Chavis’ (1986) sense of community components (e.g. membership, integration and fulfillment of needs, influence, and shared emotional connection) to assess how responses to qualitative questions related to sense of community; however, data collected were small, so responses specific to particular participants were also coded and discussed. Validity of results were considered through interpretive validity as “…accounts of meaning must be based initially on the conceptual framework of the people whose meaning is in question,” to best reflect the meaning assigned to data from participants, and through theoretical validity which “…refers to an account’s function as an explanation…of the phenomena” (Maxwell, 1992, pp. 289-291). Interpretive validity and theoretical validity allow for the understanding of individual perspectives and their potential connection to McMillan and Chavis’ (1986) theory and definition of sense of community.

**Ethical Considerations**

**Incentives and/or compensation.** Participation in this study was completely voluntary. Recruitment of participants was not contingent on incentives nor compensation. This stance was taken to ensure participants were willing to participate in the study without any undue pressure or the desire to participate when it would not have been in their best interest.

**Risks.** Phase one of the study posed relatively low harm to participants, if any. SCI-2 questions do not include trigger words or word phrasing which intentionally elicit the recollection of negative experiences. However, there may be some participants who recalled negative experiences as a result of taking part in the questionnaire, although, unlikely due to the
tone and construction of the questionnaire. Similarly, phase two of the study may have posed relatively low harm but could have induced some psychological distress within participants. As a result of participating in the open-ended questionnaire, personal emotions may have been elicited when describing individual experiences in college. Some participants may have been unaffected by describing their personal experiences in college, but others may have re-experienced traumatic events as a result of participation. For instance, remembering racist actions or exclusion due to race could cause participants to become anxious or upset. Such experiences were not explored and are merely some possible examples of reactions to this type of study. To safeguard against such potential harm, participants were made aware of the general types of questions asked and their purpose before beginning. Participants were also aware of their ability to discontinue the study without adverse consequences if they felt the need.

**Benefits.** Through this research, participants have assisted in understanding where minority students establish sense of community in college and which factors contribute to such community, as well as how sense of community may influence academic achievement. Further, participants contributed to greater understanding of the differences and similarities between minority and majority students’ sense of community. Understanding of these data could provide valuable insight for community members and colleges and universities, contributing to knowledge which may support greater established community within the college setting for students and their academic achievement, specifically within minority populations. Participants also had the opportunity to explore how they personally experience sense of community within the college setting, a potentially unexplored endeavor, which may contribute to participants’
greater understanding of themselves and what they deem important in establishing a sense of community.

**Chapter Four: Results**

**Preliminary Analysis**

Preliminary analysis was conducted in the form of descriptive statistics to measure central tendency among continuous variables (Grade Point Average, age, Total Sense of Community Scores, and Total Membership Scores for Campus Community) and frequencies among categorical variables (racial, ethnic, and cultural background, dummy coded minority background, current year in university, gender identity, and SCI-2 Initial Question Scores, and Identified Communities) prior to implementing statistical tests. However, data was first manipulated to create new variables appropriate for analysis. Subsequently, assumptions for statistical analysis were checked prior to conducting inferential tests.

**Manipulation of data.** Racial, cultural, and ethnic backgrounds were dummy coded to create two categories (1 = minority, 0 = non-minority), excluding “other” and “prefer not to answer” responses, as analysis would measure the differences between minority and majority student data. Additionally, Total Sense of Community Scores were calculated for Campus Community, Self-Identified Community 1, and Self-Identified Community 2, as well as Total Membership scores for Campus. Lastly, communities reported within Self-Identified Community 1 and Self-Identified Community 2 were assessed for themes and were categorized accordingly into three communities (1 = Academic Community, 2 = Extracurricular Community, 3 = Personal Community).
Measures of central tendency. Measures of central tendency were calculated by running descriptives of data. The following data included: Grade Point Average (N = 72, M = 3.45, SD = .39); Age (N = 73, M = 22.81, SD = 4.46); Total Sense of Community for Campus Community, “Community A” (N = 46, M = 32.54, Mdn = 32.50 (IQR: 26, 44), SD = 12.47); Total Sense of Community for Self-Identified Community 1, “Community B” (N = 41, M = 47.12, Mdn = 47 (IQR: 41, 57), SD = 14.47); Total Sense of Community for Self-Identified Community 2, “Community C” (N = 34, M = 42.65, Mdn = 46 (IQR: 31, 52), SD = 14.98); Total Membership for Campus, “Community A” (N = 54, M = 8.02, Mdn = 8 (IQR: 6, 10), SD = 3.72). Non-parametric median was reported, in addition to the mean, to account for skewed data in sense of community and membership scores, along with the dispersion of data represented by the interquartile range.

Frequencies. Racial, cultural, and ethnic backgrounds were comprised of African-American/Black (9.6%), Asian/Pacific Islander/Hawaiian (14.5%), Hispanic/Latino(a) (14.5%), Caucasian (27.7%), two or more (22.9%), and other (3.6%). Dummy coded minority background was comprised of Minority (61.4%) and Non-Minority (27.7%). Current year in university ranged from Freshman to Graduate, including: Freshman (18.1%), Sophomore (14.5%), Junior (18.1%), Senior (including 5th year and beyond) (32.5%), and Graduate (13.3%). Gender Identity was comprised of Male (20.5%), Female (68.7%), Genderqueer/Gender Non-Conforming (3.6%), and Different Identity (1.2%).

Participants completed an initial question on the SCI-2 measuring their level of agreement with the statement, “How important is it to you to feel a sense of community with other community members” for each community identified (Campus Community, Self-Identified
Community 1, and Self-Identified Community 2). However, not all participants completed the SCI-2 for each community (Campus Community, N = 61; Self-Identified Community 1, N = 50; Self-Identified Community 2, N = 41). For Campus Community, responses included: Not Important at All (1.2%), Not Very Important (7.2%), Somewhat Important (22.9%), Important (28.9%), and Very Important 13.3%). For Self-Identified Community 1, responses included: Not Important at All (1.2%), Not Very Important (3.6%), Somewhat Important (8.4%), Important (25.3%), and Very Important (21.7%). For Self-Identified Community 2, responses included: Not Important at All (2.4%), Not Very Important (2.4%), Somewhat Important (10.8%), Important (21.7%), and Very Important (12.0%). Such responses indicate students are interested in establishing a sense of community in the campus and in other communities within the campus as the highest percentages ranged from Important to Very Important. Participants were not instructed to list their two additional communities in rank order; however, Self-Identified Community 1 may be interpreted as participants’ best alternative community as percentages rank higher than Self-Identified Community 2.

Participant responses for Self-Identified Community 1 and Self-Identified Community 2 produced three categories: academic communities, extracurricular communities, and personal communities. Academic communities were interpreted as any community with a focus on academic support, such as having community within an academic department or major. Extracurricular communities were interpreted as formal collectives in which students participated, ranging from athletics to racially- and ethnically-focused organizations. Personal communities were interpreted as informal groupings, such as friends or communities with shared backgrounds/identities (e.g. other Latino students, other LGBTQ students).
For Self-Identified Community 1, participants reported academic communities (14.5%), extracurricular communities (31.3%) and personal communities (18.1%). When data was split by minority background, minority participants reported academic communities (17.6%), extracurricular communities (27.5%) and personal communities (21.6%); and non-minority participants reported academic communities (8.7%), extracurricular communities (43.5%) and personal communities (13.0%). Extracurricular communities remained the most frequently reported community within the college campus among both minority and non-minority participants for Self-Identified Community 1. Participation in extracurricular communities appear to be of important value for both minority and non-minority students in college.

For Self-Identified Community 2, participants reported academic communities (16.9%), extracurricular communities (14.5%) and personal communities (20.5%). When data was split by minority background, minority participants reported academic communities (17.6%), extracurricular communities (13.7%) and personal communities (19.6%); and non-minority participants reported academic communities (21.7%), extracurricular communities (13.0%) and personal communities (21.7%). Personal communities remained the most frequently reported community within the college campus among minority participants for Self-Identified Community 2; however, academic communities and personal communities were reported with the same frequency among non-minority participants for Self-Identified Community 2. Participation in personal communities appear to be of important value for minority and non-minority students in college, with a tie between academic communities and personal communities among non-minority participants.
Assumptions. Assumptions for statistical analysis were tested prior to conducting specific quantitative analysis. Normality and linearity were assessed by graphing histograms and scatterplots. Data for non-minority participants yielded a normal distribution of scores (Sig. > .05) among Total Sense of Community for Campus Community, Grade Point Averages, Total Membership Scores for Campus Community, Total Sense of Community for Self-Identified Community 1, and Total Sense of Community for Self-Identified Community 2. Data for minority participants yielded normal distribution of scores (Sig. > .05) among Total Sense of Community for Campus Community, Grade Point Averages, and Total Membership Scores for Campus Community; however, data did not yield normal distribution of scores (Sig. < .05) among Total Sense of Community for Self-Identified Community 1, and Total Sense of Community for Self-Identified Community 2. Distributions also appeared linear. Parametric tests would be appropriate for normally distributed data; however, the sample within this study is small, and smaller yet when cases are excluded pairwise for particular tests between minority and non-minority participants, so non-parametric statistical analysis was conducted to answer the following research questions.

Quantitative Analysis

Do minority students have lower Sense of Community for Campus Community compared to non-minority students? A Mann-Whitney U Test was conducted to reveal group differences between minority and non-minority participants relating to Sense of Community for Campus Community.
• The Mann-Whitney U Test revealed no significant difference in Sense of Community Scores for Campus Community between minority and non-minority participants, $U = 176$, $z = .66$, $p = .51$, $r = .1$.

A significant difference does not exist between minority and non-minority participants’ Sense of Community Scores for Campus Community.

**Do minority students report lower Membership Scores for Campus Community compared to non-minority students?** A Mann-Whitney U Test was conducted to reveal group differences between minority and non-minority participants relating to Membership Scores for Campus Community.

• The Mann-Whitney U Test revealed no significant difference in Membership Scores for Campus Community between minority and non-minority participants, $U = 218$, $z = -.74$, $p = .46$, $r = .1$.

A significant difference does not exist between minority and non-minority participants’ Membership Scores for Campus Community.

**Is there a relationship between Sense of Community and self-reported Grade Point Average?** The relationship between self-reported Grade Point Average and Sense of Community (as measured by the Sense of Community Index-2) was investigated using Spearman’s Rho correlation coefficient. To ensure no violations of normality, linearity, and homoscedasticity were present, preliminary analysis was performed by producing individual scatterplots between Grade Point Average and each community (Campus Community, Self-Identified Community 1, and Self-Identified Community 2). Data was also split by minority background (1 = minority, 0 = non-minority) to assess each group’s association. The analysis produced:
Non-Minority:

- A very small, non-significant, positive relationship between self-reported GPA and the Sense of Community reported in Campus Community (rho = .11, n = 13, p = .73), indicating an association between higher GPA with higher SOC. The relationship between the two variables account for only 1.2% of their variance; therefore, sense of community established in the campus helps explain less than 2% of the variance in respondents’ GPA.

- A small, non-significant, negative relationship between self-reported GPA and the Sense of Community reported in Self-Identified Community 1 (rho = -.29, n = 11, p = .39), indicating an association between higher GPA with lower SOC. The relationship between the two variables account for only 8.4% of their variance; therefore, sense of community established in Self-Identified Community 1 helps explain about 8% of the variance in respondents’ GPA.

- A very small, non-significant, negative relationship between self-reported GPA and the Sense of Community reported in Self-Identified Community 2 (rho = -.11, n = 8, p = .8), indicating an association between higher GPA with lower SOC. The relationship between the two variables account for only 1.2% of their variance; therefore, sense of community established in Self-Identified Community 2 helps explain less than 2% of the variance in respondents’ GPA.

The relationship between Sense of Community Scores and self-reported Grade Point Average for non-minority participants appears to be weak as the shared variance among the two variables accounted for a maximum of less than 9%.
Minority:

- A very small, non-significant, positive relationship between self-reported GPA and the Sense of Community reported in Campus Community (rho = .11, n = 30, p = .58), indicating an association between higher GPA with higher SOC. The relationship between the two variables account for only 1.2% of their variance; therefore, sense of community established in the campus helps explain less than 2% of the variance in respondents’ GPA.

- A very small, non-significant, positive relationship between self-reported GPA and the Sense of Community reported in Self-Identified Community 1 (rho = .14, n = 28, p = .47), indicating an association between higher GPA with higher SOC. The relationship between the two variables account for only 2% of their variance; therefore, sense of community established in Self-Identified Community 1 helps explain 2% of the variance in respondents’ GPA.

- A small, non-significant, positive relationship between self-reported GPA and the Sense of Community reported in Self-Identified Community 2 (rho = .22, n = 24, p = .31), indicating an association between higher GPA with higher SOC. The relationship between the two variables account for only 4.8% of their variance; therefore, sense of community established in Self-Identified Community 2 helps explain nearly 5% of the variance in respondents’ GPA.

The relationship between Sense of Community Scores and self-reported Grade Point Average for minority participants appears to be very weak as the shared variance among the two variables accounted for a maximum of less than 5%.
Is there a relationship between Sense of Community for Campus Community and other communities? The relationship between Sense of Community for Campus Community and other communities reported (as measured by the Sense of Community Index-2) was investigated using Spearman’s Rho correlation coefficient to understand if the two Self-Identified Communities influenced Sense of Community for Campus Community. To ensure no violations of normality, linearity, and homoscedasticity were present, preliminary analysis was performed by producing individual scatterplots between Sense of Community for Campus Community and each other community (Self-Identified Community 1 and Self-Identified Community 2). Data was also split by minority background (1 = minority, 0 = non-minority) to assess each group’s association. The analysis produced:

Non-Minority:

- A small, non-significant, positive relationship between Sense of Community Scores for Campus Community and Sense of Community Scores for Self-Identified Community 1 (rho = .25, n = 10, p = .49), indicating an association between higher Sense of Community Scores for Campus Community with higher Sense of Community Scores for Self-Identified Community 1. The relationship between the two variables account for only 6.3% of their variance; therefore, Sense of Community for Campus Community helps explain about 6% of the variance in respondents’ Sense of Community for Self-Identified Community 1.
• No relationship between Sense of Community Scores for Campus Community and Sense of Community for Self-Identified Community 2 (rho = .00, n = 7, p = 1.0).

The relationship between Sense of Community for Campus Community and other communities appears to be very weak for non-minority participants, as the shared variance among the two variables accounted for a maximum of about 6%.

Minority:

• A medium, positive relationship between Sense of Community Scores for Campus Community and Sense of Community Scores for Self-Identified Community 1 (rho = .39, n = 27, p = .04), indicating an association between higher Sense of Community Scores for Campus Community with higher Sense of Community Scores for Self-Identified Community 1. The relationship between the two variables account for 15.2% of their variance; therefore, Sense of Community for Campus Community helps explain about 15% of the variance in respondents’ Sense of Community for Self-Identified Community 1.

• An extremely small, non-significant, positive relationship between Sense of Community Scores for Campus Community and Sense of Community Scores for Self-Identified Community 2 (rho = .04, n = 22, p = .85), indicating an association between higher Sense of Community Scores for Campus Community with higher Sense of Community Scores for Self-Identified Community 2. The relationship between the two variables account for less than 1% of their variance; therefore, Sense of Community for Campus Community helps explain
less than 1% of the variance in respondents’ Sense of Community for Self-Identified Community 2.

The relationship between Sense of Community for Campus Community and Sense of Community for Self-Identified Community 1, for minority students, appears to be moderate as the shared variance among the two variables accounted for about 15%. Therefore, establishing a sense of community in another community within the college campus may have some influence on minority students’ overall sense of community to the college campus.

**Does minority background influence Sense of Community for Campus Community?**

The relationship between minority background and Sense of Community for Campus Community (as measured by the Sense of Community Index-2) was investigated using Spearman’s Rho correlation coefficient. A bar graph assessing the mean Sense of Community for Campus Community Scores was first created to gather a preliminary relationship between the two variables.
The mean scores for non-minority (n = 13, M = 34.38, SD = 13.98) and minority (n = 31, M = 31.87, SD = 11.75) participants were similar, with mean scores for minority participants slightly lower. Interestingly, mean Sense of Community for Campus Community Scores were not high, encompassing mid-range scores, for neither non-minority nor minority participants as Sense of Community Scores ranged from 0 - 72. This suggests neither non-minority nor minority participants feel a strong Sense of Community for Campus Community. The analysis produced:

- A very small, non-significant, negative relationship between minority background and Sense of Community Scores for Campus Community (rho = -.10, N = 44, p = .52), indicating an association between minority background with lower Sense of Community for Campus Community. The relationship between the two variables account for 1% of their variance; therefore, minority background helps explain 1% of the variance in respondents’ Sense of Community for Campus Community.

Minority background does not appear to influence the Sense of Community established for Campus Community.

**Qualitative Analysis**

Qualitative analysis was not conducted to provide a highly detailed account of participants’ beliefs and perceptions regarding sense of community; rather, qualitative analysis within this study aimed to provide a brief overview of participants’ beliefs and perceptions to gain insight into how participants internalized sense of community, which could generate interest in further inquiry. Qualitative results yielded brief responses from participants, with relatively little substantial detail; however, such brief responses and the small sample size attained (n = 3) allowed for greater inclusion of unique responses presented in the following questions.
Do participants in this study define community similarly to McMillan and Chavis’ (1986) theory and definition? Three of the four components of sense of community were discussed in participant responses: membership, integration and fulfillment of needs, and influence. Membership was reflected when participants cited “belonging,” “inclusive,” and “label of identity” as components which encompassed sense of community for them. Integration and fulfillment of needs was reflected when one respondent discussed sense of community as being a place of safety, comfort, openness, and closeness. Additionally, influence was reflected when one participant discussed the community’s ability to influence the identity of its members within the community. Given such results, participants appeared to define sense of community similarly to McMillan & Chavis (1986).

Which factors contribute to or hinder sense of community? Sense of community was derived by meeting participants’ needs through the creation of supportive communities, opportunities to connect with peers, and safety. One respondent discussed the opportunity to work collaboratively with other cohort members, being able to support one another, and having a social space outside of the formal department to connect with other cohort members, via a Facebook page. The same respondent also discussed how institutions can provide students with the necessary knowledge of resources to succeed in college. Another student discussed how her “feeling safe” contributed to her motivation for remaining engaged in community. The same student also noted how remaining engaged through participation in extracurricular opportunities contributed to a greater connection to her university. Additionally, sense of community may be attributed to validation of membership by reaffirming one’s identity, as one respondent reflected, and through opportunities to influence one’s community, as another respondent noted, “… sense
of belonging and connection will help these students ‘pay it forward’ to other students coming after them.” Further, a second student discussed how sense of community can contribute to one’s opportunity to participate in leadership positions, another mechanism for influencing one’s community.

Accordingly, sense of community can be deprived when communities do not fulfill students’ needs, as participants attributed to a lack of trust within communities. One participant expressed the negative consequences a lack of trust may have on an individual, including “increased feelings of hopelessness.” The same participant also attributed a lower sense of community to the campus when a lack of opportunity to connect, and low diversity, existed. Additionally, sense of community may be hindered when one’s identity is incongruent with the culture of a particular community. One student discussed her departure from one community because of the “bro” culture prevalent within the group, which did not align with her and left her feeling unsafe, seemingly invalidating her membership within that group.

**What are participants’ perceptions regarding sense of community’s influence on academic achievement?** Establishing a sense of community while in college can contribute to students’ academic achievement by enhancing students’ integration and fulfillment of needs, as well as validating sense of belonging. One participant reported how being able to interact, gain important networking, and participation in leadership roles could contribute to academic success. Similarly, another participant discussed her engagement in extracurricular organizations as providing sources of advice, support, mentorship, and the development of time-management skills. Additionally, she discussed how academic achievement may be enhanced by helping students identify resources and sources of support, noting particular importance for minority and
first-generation students. Consequently, one participant reported the potential for students to feel unsupported and lost when such needs are not fulfilled. As such, the same participant expressed how low sense of community may require students to find sense of community elsewhere (e.g., with other students of color).

In contrast, one participant believed sense of community did not contribute to greater academic success; rather, greater influence of academic success was attributed to peers who had “higher academic expectations.” However, the same participant did reflect on how high sense of community may contribute to students’ academic achievement for individuals who “feel they are not worthy of success.” Similarly, another student expressed that sense of community contributed to one’s confidence. Such sentiment may affirm one’s belonging in college.

In sum, students included within this subsample derived value from establishing sense of community in college which may contribute to their academic success. Sense of community may be established by contributing to students’ integration and fulfillment of needs, as well as validating their membership. As such, experiences which limit integration and fulfillment of needs, as well as membership, hinder sense of community. Understanding students’ perspectives on sense of community provides valuable insight into the tangible issues which influence sense of community, adding substance to students’ quantitative measures.

Chapter Five: Discussion

Summary of Results

Established communities. Minority and non-minority college students establish a sense of community in similar places. Minority and non-minority participants reported a variety of self-identified communities in which they felt a sense of community within the college campus;
both minority and non-minority students most frequently reported finding a sense of community in extracurricular communities, as their first choice, when provided with an opportunity to identify two communities. However, their second choice differed slightly. Personal communities were the most frequently reported communities among minority students, but a tie between personal and academic communities was reported for non-minority students. Such results suggest extracurricular and personal communities are important for both minority and non-minority students; however, the specific communities within these categories may differ between both groups (e.g. culturally specific organizations for minority students).

**Between-Group comparisons.** Minority and non-minority group differences were analyzed to determine if Sense of Community for Campus Community Scores differed between these groups, as well as Membership Scores for Campus Community. Results indicated there was no significant difference in Sense of Community for Campus Community Scores between minority and non-minority participants. Similarly, there appeared to be no significant difference in Membership Scores for Campus Community between minority and non-minority participants.

**Correlations.** Relationships between several variables were analyzed to determine if associations existed between such variables. Variables analyzed for associations included: sense of community and grade point average, the influence of other communities on campus community, and the influence of minority background on Sense of Community for Campus Community. Results yielded insignificant relationships between all the variables assessed except for the influence Sense of Community Scores for Self-Identified Community 1 had on Sense of Community for Campus Community among minority participants.
Qualitative assessment. Students find value in establishing a sense of community while in college and conceptualize sense of community similarly to McMillan and Chavis (1986). Various issues contribute to and hinder sense of community while in college and may influence academic achievement.

Interpretation of Results

Established communities. These results are consistent with previous literature which explored the communities students find sense of community within, encompassing academic (Allendoerfer et al., 2012; Brown & Burdsal, 2012; Krause & Coates, 2008; Spanierman et al., 2013; Yosso et al., 2009), extracurricular (Allendoerfer et al., 2012; Krause & Coates, 2008; Litzler & Samuelson, 2013; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus & Quaye, 2009; Soria et al., 2012; Warner & Dixon, 2008), and personal communities (Allendoerfer et al., 2012; Kirk & Lewis, 2015; Yosso et al., 2009). It appears both minority and non-minority students establish sense of community within similar categorical communities (e.g. extracurricular and personal communities); however, specific communities which comprise each categorical community may differ, with unique cultural communities for minority students. Researchers have discussed racially- and ethnically- focused organizations minority students find sense of community within (Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus & Quaye, 2009) which may not equate to similar communities for non-minority students. Similarly, this study identified minority student inclusion in some racially- and ethnically- focused communities, however, not only within these communities. This study did not analyze the communities which comprise each categorical community; rather, one of the focuses of this study was to simply explore which types of communities minority students often
found sense of community within. The results of this study indicate all students participate in a variety of communities which contribute to their sense of community while in college, some similar and some different.

**Between-Group comparisons.** Minority students experience discriminatory practices (Cokley et al., 2011; Hwang & Goto, 2008; Iwamoto & Liu, 2010; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Nuñez, 2009; Yosso et al., 2009), have lower campus racial climate satisfaction (Museus et al., 2008), and are more likely to perceive general campus community and racial-ethnic campus community negatively (Worthington, et al., 2008). Such experiences and perceptions may contribute to lower sense of community, especially compared to non-minority students who may not experience such challenges in college. Interestingly, however, both minority and non-minority participants’ Sense of Community for Campus Community Scores were not significantly different. Similarly, Membership Scores for Campus Community were not significantly different either. Such results may appear counterintuitive as the prevalence of negative experiences which affect minority students may not affect non-minority students. Insignificant differences in Membership is particularly fascinating as discriminatory experiences may invalidate minority students’ belonging in college (Yosso et al., 2009). Therefore, expected results may have anticipated lower Membership for minority students; however, results from this study revealed mean mid-range Sense of Community for Campus Community Scores and below mid-range mean Membership Scores for Campus Community, indicating neither group had a strong sense of community to the campus, nor strong membership. Given such insignificant differences in Sense of Community for Campus Community it makes sense that minority
background did not influence Sense of Community for Campus Community. A variety of factors may contribute to such results.

Similar mid-range scores may indicate experiences in college affect both minority and non-minority students’ sense of community and membership negatively. Previous research has indicated several factors affect both minority (Museus, 2008; Museus & Quaye, 2009; Nuñez, 2009; Przymus, 2011; Walton & Cohen, 2011; Yosso et al., 2009) and non-minority (Locks et al., 2008; Kirk & Lewis, 2015; Warner & Dixon, 2011) students’ sense of community. There is a possibility that, regardless of the types of issues which may hinder sense of community and membership, both minority and non-minority students may be affected by such issues similarly. Therefore, negative, race-related experiences may lower minority students’ sense of community, but different issues may lower sense of community among non-minority students.

The results from this study may also be specific to the particular collegiate environments in which the sample was taken. Such environments may not be considered racially hostile, therefore, not contributing to lower sense of community and membership, compared to non-minority students. Additionally, these universities may provide their students with environments which contribute to their sense of community, potentially counteracting negative experiences, if any (Nuñez, 2009). Further inquiry would need to explore the reasons for similar Sense of Community for Campus Community Scores and Membership Scores for Campus Community.

**Correlations.** Previous research has indicated establishing a sense of community in college can contribute to greater academic success (Allendoerfer et al., 2012; Brown & Burdsal, 2012; Cerezo & Chang, 2013; Walton & Cohen, 2011). Qualitative results from this study indicated academic achievement may be achieved by receiving support, resources, and validating
students’ belonging in college. The correlational analysis conducted to assess the association between sense of community and grade point average yielded insignificant results, with weak connections between each community, for both minority and non-minority participants. This result may indicate that positive associations between sense of community and grade point average may be attributed to factors not present within this particular sample.

Some research has indicated that establishing a sense of community in other communities within the college campus may not necessarily increase sense of community to the collective campus (Spanierman et al., 2013; Warner & Dixon, 2011). The relationship between the campus community and other communities was assessed to determine if there was an association between such communities. Associations between campus community and other communities did not yield a significant relationship for non-minority participants; however, establishing sense of community within an additional community was positively associated with sense of campus community for minority participants. Therefore, this result may contradict previous research, indicating minority students may derive greater benefit by establishing sense of community in other communities.

**Qualitative assessment.** The results from the qualitative component of this study support previous literature which attributed sense of community to supportive systems (Boehm & Moin, 2014; Cerezo & Chang, 2013; Hausmann, et al., 2009; Krause & Coates, 2008; Litzler & Samuelson, 2013; Mendoza et al., 2011; Moreno & Sanchez Banuelos, 2013; Museus, 2008; Museus, 2011; Museus & Quaye, 2009; Nuñez, 2009; Przymus, 2011; Strayhorn, 2008; Warner & Dixon, 2011; Yosso et al., 2009) and peer interactions (Allendoerfer et al., 2012; Boehm & Moin, 2014; Cerezo & Chang, 2013; Dawson, 2008; Litzler & Samuelson, 2013; Locks et al.,
MINORITY STUDENTS IN COLLEGE

2008; Pittman & Richmond, 2008; Soria et al., 2012; Spanierman et al., 2013; Yosso et al., 2009). Additionally, participants expressed similar hindrances to community, present in previous literature, such as lack of institutional support (Nuñez, 2009; Warner & Dixon, 2011, Yosso et al., 2009), lack of opportunity to connect (Kirk & Lewis, 2015; Przymus, 2011), and lack of diversity (Przymus, 2011; Yosso et al., 2009). These findings further contribute to the prominence such factors have on influencing students’ sense of community.

Conclusion

The results of this study provided valuable insight on students’ sense of community in college. Interestingly, anticipated differences between minority and non-minority students’ sense of community were not found, as minority and non-minority students established a sense of community in similar communities, and significant differences in Sense of Community for Campus Scores and Membership Scores for Campus Community did not exist. Assessing sense of community can be complex and difficult to conceptualize; therefore, further inquiry is warranted. A greater understanding of sense of community within the college context may aid in supporting minority and non-minority students, thus, validating its importance within the academic literature.

Limitations

Several limitations existed within this study. Sample size was a critical limitation of this study as the desired sample to reach significant power was not achieved. Due to the small sample size of this study, nonparametric tests were used, rather than the stronger, corresponding parametric tests. Within this sample, additional limitations were apparent. Response for each SCI-2 questionnaire varied among minority and non-minority participants, posing a challenge to
analysis. Further, self-identified communities were not listed in rank order; therefore, there was difficulty in assessing which community (Self-Identified Community 1, Self-Identified Community 2) would be the best alternative community found within the college campus. A replication of this study addressing these limitations may yield different results; therefore, results of this study should be interpreted cautiously.

**Future Directions**

This study has contributed to literature focused on understanding minority students’ sense of community in college; however, further research can be conducted to provide greater clarification of results in this study. Similar Sense of Community for Campus Community Scores and Membership Scores for Campus Community warrant further inquiry to assess potential reasons for such similarities. Subsequent research may couple the SCI-2 with a campus racial climate measurement tool to assess if negative campus racial climates affect minority students’ sense of community. Additionally, qualitative studies may be conducted to gather individual perspectives of minority students’ reasons for not establishing a higher Sense of Community for Campus Community.


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Appendix A: Targeted Enrollment Table

TARGETTED ENROLMENT TABLE for a study design with TWO SUB-POPULATIONS

**Study design investigator descriptions:** This is a PopX/PopY design. PopX will be recruited from Concordia University-Portland. PopY will be recruited from Portland State University. The TEP represents the sample that will be included in this study. An equal number of members per ethnic and racial group is required and the male to female ratio is based on the percentage of representation on each campus. The ethnic and racial categories listed were chosen as these demographics are the most prevalent on these campuses to ensure a significant number of responses would be gathered; however, there may be individuals that do not identify with these categorizes, so the total expected population reflects the total population of both universities combined to remain inclusive and equitable.

<table>
<thead>
<tr>
<th>Ethnicity/Race Self-identifying as:</th>
<th>POPULATION (N)</th>
<th>Concordia University-Portland</th>
<th>Portland State University</th>
<th>Concordia University-Portland</th>
<th>Portland State University</th>
<th>EXPECTED ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigator notes on categories:</td>
<td># students combined from both univ. (N) =N</td>
<td>Recruit</td>
<td>Recruit</td>
<td>Expected enrollment</td>
<td>Expected enrollment</td>
<td>Combined Expected</td>
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<td>60</td>
</tr>
<tr>
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<td>45</td>
<td>45</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>TOTAL EXPECTED:</td>
<td>*33,135</td>
<td>180</td>
<td>180</td>
<td>120</td>
<td>120</td>
<td>240</td>
</tr>
</tbody>
</table>

*reflects total university populations (not total of numbers above) due to the potential inclusion of students who identify as other races.

Additionally, the racial/ethnic diversity percentages from Concordia is under represented. The percentages of students within the four categories above reflected only the undergraduate population. Graduate student diversity was not evident.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>POPULATION (N)</th>
<th>Concordia University-Portland</th>
<th>Portland State University</th>
<th>Concordia University-Portland</th>
<th>Portland State University</th>
<th>EXPECTED ENROLLMENT</th>
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</thead>
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<tr>
<td>Investigator notes on categories:</td>
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<td></td>
<td></td>
<td></td>
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<td>0 – 7 years old</td>
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<td>7-17 years old</td>
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<tr>
<td>Adult</td>
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<td>180</td>
<td>120</td>
<td>120</td>
<td>240</td>
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<td>TOTAL Expected</td>
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<td>120</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>Gender</td>
<td>POPULATION (N)</td>
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<td>Portland State University</td>
<td>Concordia University-Portland</td>
<td>Portland State University</td>
<td>EXPECTED ENROLLMENT</td>
</tr>
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</tr>
<tr>
<td>Investigator notes on categories:</td>
<td>% reflected in school population</td>
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<td>54</td>
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<tr>
<td>TOTAL Expected</td>
<td>33,135</td>
<td>180</td>
<td>180</td>
<td>120</td>
<td>120</td>
<td>240</td>
</tr>
</tbody>
</table>
Appendix B: Recruitment Flyers

MINORITY STUDENTS IN COLLEGE: FINDING SENSE OF COMMUNITY

Master’s Thesis Research Study, Concordia University and Portland State University
Principle Investigator: Ernesto Vasquez III, soc.researchconcordia@gmail.com

A CALL FOR RESEARCH PARTICIPANTS

Purpose of Study:
The primary purpose of this study is to explore where ethnic and racial minority students in college find a sense of community at Predominantly White Institutions (PWI); this will be compared with majority student perspectives in which similarities and differences in perspectives will be analyzed. Participants will rate the sense of community they feel towards several communities in which they identify as being members. Additionally, this study will explore how sense of community may affect academic outcomes for such college students. This study will take place in two phases. Phase one will be a relatively short questionnaire. Following phase one, select participants from phase one will be recruited to participate in phase two of the study, consisting of a few open-ended questions.

WHO CAN PARTICIPATE?
- Both undergraduate and graduate students enrolled at either Concordia University or Portland State University
- College students from any ethnic, racial, and/or cultural background, including majority students
- College students of any gender identity

HOW TO PARTICIPATE
Follow the bitlink or QR code below to access the questionnaire where you will be able to review an informed consent form that discusses the anticipated risks and benefits of the study. Your consideration in participating in the study is greatly appreciated.
Participation is completely voluntary.
bit.ly/SOCresearch

For more information about the research study, contact the principle investigator, Ernesto Vasquez III, via soc.researchconcordia@gmail.com. If you have questions directed towards the Institutional Review Board (IRB), you may contact the director for Concordia University-Portland’s IRB, Dr. OraLee Branch, via obranch@cu-portland.edu or 503-493-6390.
MINORITY STUDENTS IN COLLEGE: FINDING SENSE OF COMMUNITY (Master’s Thesis Research Study)

**Research Purpose:**
The primary purpose of this study is to explore where ethnic and racial minority students in college find a sense of community at Predominantly White Institutions (PWI); this will be compared with majority student perspectives in which similarities and differences in perspectives will be analyzed.

**Who Can Participate?**
- Undergraduate and graduate students (Concordia University and Portland State University)
- Students from any ethnic, racial, and/or cultural background, including majority students and students of any gender identity

**Participation is completely voluntary.**

The questionnaire can be found at the following link or QR code.


For more information about the research study, contact the principle investigator, Ernesto Vasquez III, via soc.researchconcordia@gmail.com.
Appendix C: Consent Forms

Voluntary Consent Form: Phase One

**Research Study Title:** Minority Students in College: Finding a Sense of Community
**Principle Investigator:** Ernesto Vasquez III
**Research Institution:** Concordia University-Portland; Portland State University
**Faculty Advisor:** Dr. Kris Kuhn

**Purpose and Research Process:**
The primary purpose of this study is to explore where ethnic and racial minority students in college find a sense of community at Predominantly White Institutions (PWI); this will be compared with majority student perspectives in which similarities and differences in perspectives will be analyzed. Participants will rate the sense of community they feel towards several communities in which they identify as being members. Additionally, this study will explore how sense of community may affect academic outcomes for such college students. This study will take place in two phases. Phase one is a relatively short questionnaire, taking between 10-15 minutes. Participants will report to what extent they feel a sense of community across three contexts: the college campus as a whole and two self-identified, sub-communities on campus. The questionnaire will be distributed using Qualtrics.

After phase one is complete, a select few participants from phase one will be invited to participate in phase two. Phase two will involve completing a few open-ended questions. Participants will be asked to elaborate on factors that contribute and/or deter from establishing a sense of community to the various contexts reported in phase one. Participants will also be asked to express their thoughts on how a sense of community, or lack thereof, may affect or has affected their academic outcomes in college. The open-ended questions will also be distributed using Qualtrics.

**Risks:**
In phase one, participants will be asked to provide an email address, demographic information and grade point averages (GPA), as well as personal responses to the questionnaire. A breach of confidentiality is always a risk, even if minimal. The information gathered in phase one will directly connect individuals to their responses when providing their email addresses. Email addresses are necessary to link individuals from phase one to phase two responses if they are chosen to participate in phase two of the study. To keep participants’ responses more confidential, personally identifiable information (email addresses) will be linked to an external survey, in which participants will be able to write their email addresses; this will minimize the risk of linking individuals to their responses. No anticipated harm has been associated with the questions on the questionnaire. The survey simply asks the extent to which participants find a sense of community within particular communities, but reflecting on these questions may reveal some potentially low risk emotions, such as frustration.

At the end of phase one, participants will be able to express their interest in participating in phase two of the study. If participants are interested in taking part in phase two of the study, they will be sent a follow-up email if chosen to participate. In phase two, participants will be required to consent to the next phase of the study. If participants consent and take part in phase two of the study, phase one responses will be linked to phase two responses. To further maintain confidentiality, participants will again complete an external survey, in which participants will be able to write their email addresses. Participants will be asked to reflect deeper on why they may or may not find a sense of community in various contexts. This deeper reflection may cause some students to reflect on negative experiences, which could cause some
psychological distress, such as anger and/or sadness. Still, the anticipation of any harm to participants is low.

To safeguard against these potential harms, participants will be able to stop the questionnaire or open-ended section process at any time. If participants want to leave the study or simply take a break they will be accommodated.

**Benefits:**
Through this research, participants will assist in understanding where minority students in college find a sense of community, which factors contribute to a sense of community, and how sense of community may affect academic outcomes in college. Understanding where minority students find a sense of community may benefit students who experience college environments where they are marginalized. Information gathered may be used to further support minority students in college that may lead to greater well-being and college success. Participants’ opinions and shared experiences will be taken respectfully and without judgment.

**Confidentiality:**
Several measures will be taken to ensure data gathered will not be misused. The information gathered from participants will remain in the custody of the primary researcher, thus limiting access to confidential information. Data gathered will be encrypted and stored on a laptop accessible only to the primary researcher. Although these measures will be taken, participants should understand that some personal information may be revealed if there is a breach in confidentiality. The data gathered in phase one and two will pose a lower risk of being able to identify individuals to their responses as external surveys will link identifiable information to questionnaire responses. Additionally, Qualtrics gathers the IP address of individuals filling out both the questionnaire and open-ended questions.

**Right to Withdraw:**
Participants will be able to withdraw from the study at any point in time to ensure emotions and personal feelings are respected. The intention of the study is not to elicit negative responses, but researchers understand that unintended or unanticipated emotions and feelings may arise due to participation in this study. If participants would like to continue participation but require a break at any time, they will be accommodated, and their participation will continue when they deem appropriate. Participation in this study is completely voluntary and participants’ withdrawal or limited participation will not lead to adverse consequences.

**Contact Information:**
Any questions regarding this consent form may be directed to Ernesto Vasquez III, the principle investigator, via soc.researchconcordia@gmail.com. Questions for the Institutional Review Board (IRB) may be sent to the director for Concordia University-Portland’s IRB, Dr. OraLee Branch, via obranch@cu-portland.edu or 503-493-6390.
Voluntary Consent Form: Phase Two

Research Study Title: Minority Students in College: Finding a Sense of Community  
Principle Investigator: Ernesto Vasquez III  
Research Institution: Concordia University-Portland; Portland State University  
Faculty Advisor: Dr. Kris Kuhn

Purpose and Research Process:
The primary purpose of this study is to explore where ethnic and racial minority students in college find a sense of community at Predominantly White Institutions (PWI); this will be compared with majority student perspectives in which similarities and differences in perspectives will be analyzed. Phase two of the study will involve completing a few open-ended questions. Participants will be asked to elaborate on factors that contribute and/or deter from establishing a sense of community to the various contexts reported in phase one. Participants will also be asked to express their thoughts on how a sense of community, or lack thereof, may affect or has affected their academic outcomes in college. The open-ended questions will be distributed using Qualtrics.

Risks:
Participants will provide email addresses and responses to a few open-ended questions. A breach of confidentiality is always a risk, even if minimal. Participating in phase two of the study will link participants’ responses from phase one to phase two, as participants are selected from phase one. The information gathered in phase two will directly connect individuals to their responses when providing their email addresses. Email addresses are necessary to link individuals from phase one to phase two responses. To further maintain confidentiality, participants will complete an external survey, in which participants will be able to write their email addresses. Participants will be asked to reflect deeper on why they may or may not find a sense of community in various contexts. This deeper reflection may cause some students to reflect on negative experiences, which could cause some psychological distress, such as anger and/or sadness. Still, the anticipation of any harm to participants is low.

To safeguard against these potential harms, participants will be able to stop the open-ended questionnaire process at any time. If participants want to leave the study or simply take a break they will be accommodated.

Benefits:
Through this research, participants will assist in understanding where minority students in college find a sense of community, which factors contribute to a sense of community, and how sense of community may affect academic outcomes in college. Understanding where minority students find a sense of community may benefit college environments where they are marginalized. Information gathered may be used to further support minority students in college that may lead to greater well-being and college success. Participants’ opinions and shared experiences will be taken respectfully and without judgment.

Confidentiality:
Several measures will be taken to ensure data gathered will not be misused. The information gathered from participants will remain in the custody of the primary researcher, thus limiting access to confidential information. Data gathered will be encrypted and stored on a laptop accessible only to the primary researcher. Although these measures will be taken, participants should understand that some personal information may be revealed if there is a breach in confidentiality. The data gathered in phase two will pose a lower risk of being able to identify individuals to their responses as an external survey will link
personally identifiable information (email addresses) to questionnaire responses. Additionally, Qualtrics gathers the IP address of individuals filling out the open-ended questionnaire.

**Right to Withdraw:**
Participants will be able to withdraw from the study at any point in time to ensure emotions and personal feelings are respected. The intention of the study is not to elicit negative responses, but researchers understand that unintended or unanticipated emotions and feelings may arise due to participation in this study. If participants would like to continue participation but require a break at any time, they will be accommodated, and their participation will continue when they deem appropriate. Participation in this study is completely voluntary and participants’ withdrawal or limited participation will not lead to adverse consequences.

**Contact Information:**
Any questions regarding this consent form may be directed to Ernesto Vasquez III, the principle investigator, via soc.researchconcordia@gmail.com. Questions for the Institutional Review Board (IRB) may be sent to the director for Concordia University-Portland’s IRB, Dr. OraLee Branch, via obranch@cu-portland.edu or 503-493-6390.
### Appendix D: Codebook

<table>
<thead>
<tr>
<th>SPSS Name</th>
<th>Variable</th>
<th>Coding Instruction</th>
<th>Measurement Scale</th>
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<tbody>
<tr>
<td>ID</td>
<td>Identification Number</td>
<td>Number Assigned to Each Survey</td>
<td>Scale</td>
</tr>
<tr>
<td>Background</td>
<td>Racial/Cultural/Ethnic Background</td>
<td>1=African American/Black, 2=Asian/Pacific Islander/Hawaiian, 3=Hispanic/Latino(a), 4=Caucasian, 5= Two or More, 6=Other, 7=Prefer not to answer</td>
<td>Nominal</td>
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<td>BackgroundDC</td>
<td>Racial/Cultural/Ethnic Background Dummy-Coded</td>
<td>1=minority, 0=non-minority</td>
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<td>University</td>
<td>University Attended</td>
<td>1=Concordia, 2=Portland State</td>
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<tr>
<td>EdYear</td>
<td>Current Year in University</td>
<td>1=Freshman, 2=Sophomore, 3=Junior, 4=Senior (including 5th year and beyond), 5=Graduate Student</td>
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<tr>
<td>GPA</td>
<td>Current Grade Point Average</td>
<td>Numerical Value of Current GPA</td>
<td>Scale</td>
</tr>
<tr>
<td>Age</td>
<td>Age</td>
<td>Age in Years</td>
<td>Scale</td>
</tr>
<tr>
<td>Gender</td>
<td>Gender Identity</td>
<td>1=Male, 2=Female, 3=Trans Male/Trans Man, 4=Trans Female/Trans Woman, 5=Genderqueer/Gender Non-Conforming, 6=Different Identity, 7=prefer not to answer</td>
<td>Nominal</td>
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<td>CommunityB2</td>
<td>Self-Identified Community 1</td>
<td>1=academic, 2=Extracurricular, 3=personal</td>
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<td>CommunityC</td>
<td>Self-Identified Community 2</td>
<td>1=academic, 2=Extracurricular, 3=personal</td>
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<tr>
<td>IQA</td>
<td>Initial Question on SCI-2 (Campus Community, community A)</td>
<td>1=Prefer Not to be Part of This Community, 2=Not Important at All, 3=Not Very Important,</td>
<td>Ordinal</td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td>IQB</td>
<td>Initial Question on SCI-2 (Self-Identified Community 1, Community B)</td>
<td>1=Prefer Not to be Part of This Community, 2=Not Important at All, 3=Not Very Important, 4=Somewhat Important, 5=Important, 6=Very Important, 999=No Response</td>
<td>Ordinal</td>
</tr>
<tr>
<td>IQC</td>
<td>Initial Question on SCI-2 (Self-Identified Community 2, Community C)</td>
<td>1=Prefer Not to be Part of This Community, 2=Not Important at All, 3=Not Very Important, 4=Somewhat Important, 5=Important, 6=Very Important, 999=No Response</td>
<td>Ordinal</td>
</tr>
<tr>
<td>SOCa1 to SOCa24</td>
<td>Sense of Community Index-2 Scale</td>
<td>0=Not at All, 1=Somewhat, 2=Mostly, 3=Completely</td>
<td>Scale</td>
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<td>TSOCa</td>
<td>Total Sense of Community Index-2 Scale for Campus (Community A)</td>
<td>Add items SOCa1 to SOCa24, range 0 to 72</td>
<td>Scale</td>
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<td>TSOCb</td>
<td>Total Sense of Community Index-2 Scale for Self-Identified Community 1 (Community B)</td>
<td>Add items SOCb1 to SOCb24, range 0 to 72</td>
<td>Scale</td>
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<td>TSOCc</td>
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<td>Add items SOCc1 to SOCc24, range 0 to 72</td>
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<td>TRINA</td>
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<td>Abbreviation</td>
<td>Description</td>
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<td>TMEMa</td>
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<td>TINFa</td>
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<td>TSHARa</td>
<td>Total Shared Emotional Connection SCI-2 Subscale for Campus Community</td>
<td>Add items SOCa19 to SOCa24, range 0-18</td>
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</table>
Appendix E: Data Distributions (Histograms and Scatterplots)

Preliminary Analysis

![Histogram](image)

**Histogram**

Background Dummy Coded: Non-minority

- Mean = 34.38
- Std. Dev. = 13.685
- N = 13

![Normal Q-Q Plot](image)

**Normal Q-Q Plot of Total Sense of Community Campus (Community A)**

Background Dummy Coded: Non-minority
MINORITY STUDENTS IN COLLEGE

Histogram
Background Dummy Coded: Minority

Current Grade Point Average

Normal Q-Q Plot of Current Grade Point Average
Background Dummy Coded: Minority

Observed Value

Expected Normal

Mean = 3.40
Std. Dev. = .421
N = 46
Quantitative Analysis

Simple Scatter with Fit Line of Current Grade Point Average by Total Sense of Community Campus (Community A)

Background Dummy Coded: Non-minority

Simple Scatter with Fit Line of Current Grade Point Average by Total Sense of Community Campus (Community A)

Background Dummy Coded: Minority
Simple Scatter with Fit Line of Current Grade Point Average by Total Sense of Community for Self-Identified Community 1 (community B)

Background Dummy Coded: Non-minority

R: Linear = 0.053

Simple Scatter with Fit Line of Current Grade Point Average by Total Sense of Community for Self-Identified Community 1 (community B)

Background Dummy Coded: Minority

R: Linear = 0.075
MINORITY STUDENTS IN COLLEGE

Simple Scatter with Fit Line of Total Sense of Community Campus (Community A) by Total Sense of Community for Self-Identified Community 1 (community B)

Background Dummy Coded: Non-minority

R^2 Linear = 0.16

Simple Scatter with Fit Line of Total Sense of Community Campus (Community A) by Total Sense of Community for Self-Identified Community 1 (community B)

Background Dummy Coded: Minority

R^2 Linear = 0.278
MINORITY STUDENTS IN COLLEGE

Simple Scatter with Fit Line of Total Sense of Community Campus (Community A) by Total Sense of Community for Self-Identified Community 2 (Community C)

Background Dummy Coded: Non-minority

R (Linear) = 0.061

Simple Scatter with Fit Line of Total Sense of Community Campus (Community A) by Total Sense of Community for Self-Identified Community 2 (Community C)

Background Dummy Coded: Minority

R (Linear) = 0.062