

EXAMINING OFF-CAMPUS STUDENTS' SENSE OF BELONGING AND BEHAVIORS IN
A TOWN-GOWN CONTEXT

By

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ABSTRACT

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The current study emerged from the need to address student behavior issues in town-gown communities and the practical need to know more about off-campus students as central actors in these behaviors. Off-campus students have long been labeled as commuter students because of limited recognition of the known diversity within the commuter population (Dugan, Garland, Jacoby, & Gasiorowski, 2008) and an absence of town-gown scholarship focused on college student residents of the local community (Kemp, 2013). The current study sought to remedy the little attention given to off-campus students through the exploration of their sense of belonging to the local community, and in turn, how sense of belonging influenced behavior in the town-gown context.

An American college town was the town-gown context chosen for the current study because of its capacity to showcase the unique influence the university has on the character of the town (Gumprecht, 2008). Using a stratified random sampling, the sample ($n = 645$) was drawn from the population of undergraduate students living off campus in the City of East Lansing, Michigan. Strata were determined based on residential density levels due to an interest in assessing how residential environments of varying densities influenced sense of belonging in off-campus students.

The current study utilized sense of belonging and town-gown literature to guide the selection of exogenous and intervening predictor variables relevant in the town-gown context. These predictor variables included demographic characteristics (e.g., age, sex, race, year in

school) and density categorization along with intervening variables such as environmental perceptions, social interactions, and behavior participation. Criterion variables included sense of belonging and positive and negative behavior participation. Hierarchical regression analyses were used to determine the extent these demographic and community factors influenced sense of belonging, as well as how sense of belonging influenced participation in positive and negative behaviors in the town-gown context.

The study concluded off-campus students were a unique cohort in the student population, warranting future attention from scholars and practitioners. Sense of belonging was not predicted by demographic and density characteristics, but was positively influenced by perceptions of community (e.g., reliability, friendliness) and positive behavior participation (e.g., attending community events, utilizing city services). Number of roommates, semesters lived off-campus, and residential density associated with houses were positive predictors of behavior participation, both positive and negative. Environmental and social relations constructs were positive predictors of both positive and negative behavior participation. Sense of belonging was a positive predictor of positive behavior participation, but was not a predictor of negative behaviors. The discussion offers insights and direction for town-gown administrators tasked with creating policy and practical interventions aimed at supporting off-campus students, while also addressing the unique challenges stemming from student behaviors in the local community.

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The doctoral experience has been a journey woven together by the many relationships, experiences, and personal accomplishments along the way. There have been stops and starts, new skills and abilities learned, and cognitive challenges and growth throughout. Each strand of experience and each word put to page wove together the final product of this doctoral journey, the dissertation. Along the way, I have had teachers, encouragers, guides, and champions contributing to my development in this academic endeavor and the cultivation of my final research project. I am deeply thankful for the presence of all in this journey.

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CHAPTER ONE

Introduction to the Study

Undergraduate students, who reside off-campus in the local community where they attend college, are at the center of tensions between local municipalities and higher education institutions because of their association with causing numerous problems in the community. News stories, police reports, and resident complaints cite parties, noise, litter, disorderly conduct, public urination, drug and alcohol use, vandalism, and assaults among the problematic behaviors caused by off-campus students in the local community (McLaughlin, 2011; Twohey, 2007). An NBCNews.com story depicted neighbors' distress at the "loud parties, rundown student boarding houses and trash generated by weekend melees" in a Seattle neighborhood adjacent to the University of Washington (Blankinship, 2008, para. 2). A story in the Daily Athenaeum, the newspaper of West Virginia University, featured incidents of "underage drinking, drag racing, beer pong, drug dealing" and excessive noise, litter, and parties as prevalent student behavior issues caused by off-campus students in the City of Morgantown (Cossick, 2009, para 4). Duke University's Community Relations Committee emphasized the presence of "persistent problems of student parties which frequently last until 5:00 a.m. and the attendant problems of noise, trash, abusive language, greater levels of debauchery than in past years, and excessive drinking including underage drinking" as problematic in the Durham community (Moyen, 2006, para. 4).

As the news stories above depict, the presence of off-campus students living in the local community can be a significant source of town-gown tensions between a university and community. The term "town-gown" refers to the relationship between the university, or "gown", and the lay people of the community, or "town", and is historically utilized to imply a tension or

conflict between the entities (Mayfield, 2001; Thelin, 2011). In the history of higher education, student behavior issues have been a prevalent part of the town-gown relationship and have been noted for their deleterious effect on local communities and universities. The pervasive nature of student behavior issues drives complaints about off-campus students and stimulates town-gown tensions. Municipal leaders and community members implore the university to respond to off-campus student misbehaviors with judicial sanctions and educational efforts. Municipalities demand fiscal support from the university to meet the growing costs of police, fire, and emergency services dispatched in response to off-campus student behaviors (Baker-Minkel, Moody, & Keiser, 2004). Universities face negative media coverage of student behavior issues, which reflects poorly on the university's reputation and fuels negative public opinion of its college students (McLaughlin, 2011; Nichols 1990). Universities are pressured to answer questions about the university responsibility for and response to students' off-campus behaviors (Hintz, 2011; McLaughlin, 2011). The interdependent nature of the town-gown relationship compels universities and municipalities to respond and seek resolve to tensions resulting from student behaviors in the local community.

Given these tensions, many universities invest time and resources into town-gown relations in attempt to address problematic off-campus student issues, to lessen negative publicity and public opinion, and to demonstrate collaborative partnership with the local community. However, a significant problem higher education administrators confront is little is known about the student population that resides off-campus locally and is at the center of town-gown tensions. Within higher education, researchers have not previously studied off-campus students as a distinct group within the student population but instead have encompassed them in the commuter student population. This inclusion of off-campus students in the commuter student

definition is based on the shared commonality that they do not live in institution-owned housing (Jacoby, 1989; Stewart & Rue, 1983). The broad simplicity of the commuter definition portrays commuters as a homogeneous group based on the single criterion of residence. This portrayal negates the diversity inherent within the population and leads to mistaken conceptualizations of commuters as either “townies” in reference to place of residence with their parents or as nontraditional students disinterested in the college experience because of competing life roles such as employment and family commitments (Jacoby, 2000a; Stewart & Rue, 1983).

The inclusion of off-campus students in the commuter population is problematic because off-campus students are not accurately reflected in the homogeneous concept of commuters as townies or nontraditional students. Instead, off-campus students are traditional college age undergraduate students, between the ages of 18 to 22 years old, who have lived in residence halls before moving off-campus to the local community and are known to rent, live independent of guardians or direct supervision, and live in group settings among dense enclaves of fellow students (Gumprecht, 2003; Hintz, 2011; McLaughlin, 2011). These descriptive characteristics demonstrate the underlying concern that off-campus students are not accurately reflected within the commuter population. Furthermore, continued use of the homogeneous commuter definition disregards the known diversity within the commuter population and fails to address the lack of information and understanding of the off-campus student population.

The absence of insight into the off-campus student population is concerning for several reasons. First, failing to recognize the diversity inherent within the commuter population, such as the case with off-campus students, perpetuates an assumption college experiences and interventions have the same effect on all students, regardless of individual differences, rather than recognizing the potential the magnitude and effect of experiences may differ for students

based on differing characteristics (Pascarella, 2006). As a result, higher education practitioners approach town-gown efforts guided by what is known about the commuter population broadly, instead of with insight about how the off-campus student population may be similar or distinct from commuters. Second, the Council for the Advancement of Standards in Higher Education (CAS) (2012) implores higher education institutions to provide all students “equitable access to institutional services, engagement opportunities, and the total educational process regardless of place of residence” (p. 1). Striving to offer all students equitable access to educational opportunities requires institutions to move beyond a continued reliance on the homogeneous commuter concept and instead recognize within-group differences may exist within the commuter population (Dugan, Garland, Jacoby, & Gasiorowski, 2008). Lastly, institutional efforts to address town-gown tensions caused by student behavior issues are weakened by the lack of knowledge of the off-campus student population, including limited understanding of the demographic composition of this group, minimal insight into the nature of the collegiate experience from a local place of residence, and little knowledge of student involvement and behaviors beyond what is known about town-gown tensions.

Cumulatively, the lack of information about off-campus students limits efforts to support these students adequately and hampers efforts to address behavior issues central to town-gown concerns. Thus, the current study was focused on examining off-campus students as a group within the student population, with emphasis on gaining insight into the nature of their experience and behavioral choices within the off-campus community. The study aimed to broaden understanding of the demographic composition of the off-campus student population, offer insight into the behavioral choices of off-campus students in the local community, and examine potential factors influencing feelings of belonging to the local community.

Conceptual Framework

The purpose of a conceptual framework is to provide a way to think about and organize ideas to achieve a research purpose. In the current study, the purpose was to examine off-campus students and their behavioral choices in the local community as a means of gaining insight on student behavior concerns central to town-gown tensions. Given this purpose, the conceptual framing of this study blended theoretical components from two distinct, but related concepts, namely the theory of the need to belong (Baumeister & Leary, 1995) and the theory of sense of community (McMillan & Chavis, 1986). The following section details each theory and explores their use as the conceptual framework for the current study.

The Need to Belong: A Fundamental Human Motivation

The theory of the need to belong (Baumeister & Leary, 1995) served as the primary conceptual underpinning for the current study because the need to belong provided a theoretical construct to examine students' motivations in the town-gown environment. The usefulness of the need to belong as a construct to study motivation stemmed from its designation as a fundamental human motivation. On a theoretical level, Baumeister and Leary (1995) established the significance of the need to belong by arguing for the need to belong to be designated as a fundamental human motivation. The authors successfully demonstrated the need to belong satisfied criteria inherent in a fundamental human motivation, including producing effects in a spectrum of settings, yielding affective and cognitive responses, eliciting goal-oriented behavior, leading to ill effects (e.g. on health or adjustment) when thwarted, being universally applicable to all people, and affecting a wide range of behaviors. Framed as a human motivation, the authors argued the need to belong is innate, universal among humans, and a natural driver toward seeking and sustaining belonging. As such, humans have an inherent need for belonging and the

pervasive drive to satisfy this need is sufficient to motivate behavior.

The robustness of the need to belong construct (Baumeister & Leary, 1995) has led to its conceptualization and use within higher education contexts and populations as the construct of sense of belonging. Hurtado and Carter (1997) among others, used the sense of belonging construct as an alternative conceptualization for the concept of integration within higher education persistence models (Tinto, 1993). Use of the sense of belonging construct addressed the concern models of persistence focus on behavioral aspects of integration while neglecting the psychological need to belong is inherently human (Hausmann, Ye, Shofield, & Woods, 2009). Similarly, Strayhorn (2012) asserted sense of belonging refers to a student's perceived social support and feelings of mattering and connection to others in college. Satisfying this need to belong leads to positive, prosocial, and productive outcomes in education including achievement, engagement, optimal functioning, persistence, retention, and well-being (Hausmann et al., 2009; Rhee, 2008; Strayhorn, 2012).

Given the positive outcomes associated with achieving a sense of belonging in college, the belonging construct has gained greater appreciation and use within higher education research. Researchers have used sense of belonging to understand how belonging influences the college experience of students of Color (Hausmann et al., 2009; Hurtado & Carter, 1997; Johnson et al., 2007; Strayhorn, 2008; Strayhorn, 2012), first-year students (Hoffman, Richmond, Morrow, & Solomone, 2002), graduate students (Strayhorn, 2012), and part-time students (Kember, Lee, & Li, 2001). Additionally, the role of the environment in shaping sense of belonging was explored by Freeman, Anderman, and Jensen (2007) examining classroom and campus belonging and Johnson et al. (2007) examining residence hall environments.

In the current study, the sense of belonging construct provided a guide to consider how

the desire to belong may serve to motivate off-campus students' behavior choices in the local community. To further explain, suppose off-campus students have a desire to belong to the community they reside in and by striving for this belonging they participated in normative behaviors of the community, as do other community members. Within the context of the town-gown environment, these normative behaviors include the student behaviors central to town-gown tensions (e.g., partying, alcohol consumption) and typical neighborhood behaviors (e.g., yard maintenance, neighbor interactions). Engaging in these normative behaviors becomes a means for off-campus students to gain a sense of belonging within the community. Thus, in the current study, the need to belong served as a useful concept to examine how off-campus students' desire for belonging may be sufficient motivation to act in pursuit of achieving and maintaining a sense of belonging to the community.

With the emphasis on belonging in a town-gown context, the current study expanded belonging literature to include a context external to the university, namely the local community students reside in off campus while attending college. Given sense of belonging had not previously been utilized to study contexts external to the university, an additional construct to guide the examination of belonging to the local community was needed. Thus, the theory of sense of community was selected to compliment the sense of belonging construct and enhance the conceptual framework for the current study.

Sense of Community: A Theory and a Model

The concept of sense of community was closely related to the notion of sense of belonging, as both pertained to the interpersonal connections and affiliations individuals desire and feel in relation to others. McMillan and Chavis (1986) 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" (p. 9). McMillan and Chavis (1986) identified four elements essential in the cultivation of sense of community including a perception of membership, influence, integration and fulfillment of needs, and shared emotional connection. The authors emphasized these elements reflect the intimate, dynamic nature of development and maintenance of a sense of community.

Based on the theory of sense of community (McMillan & Chavis, 1986), Chavis and Wandersman (1990) created an empirical model to reflect the generation of sense of community. In the model, sense of community acted as a catalyst by mobilizing key variables to motivate participation in local action, specifically participation in voluntary neighborhood associations. The key variables found to influence participation and belonging related to an individual's perception of the environment, social relations, and perceived control and empowerment within the community. The relationship between variables in the model was found to be bidirectional and transactional, which reflected and reinforced the dynamic nature of the community development process. The model of sense of community (MSC) (Chavis & Wandersman, 1990) offered a framework for examining which factors can influence the sense of belonging and affiliation one feels toward a community. The MSC factors used in the current study included questions related to the perception of the environment and social relations themes. The third set of questions, namely the perceived control and empowerment theme, was not used because the focus of the study did not extend to understanding student agency or empowerment.

A Blended Framework

In the design of the current study, the theory of the need to belong and the model of sense of community provided the conceptual components needed to examine what influenced and

motivated student behaviors in the local community. The theory of the need to belong (Baumeister & Leary, 1995) provided the belonging construct as a way to conceptualize what served to motivate behavior in off-campus students. The model of sense of community (MSC) (Chavis & Wandersman, 1990) provided variables to consider for their ability to influence sense of belonging to a community or group. Figure 1 depicts the conceptual framework resulting from the use of components from both theories.

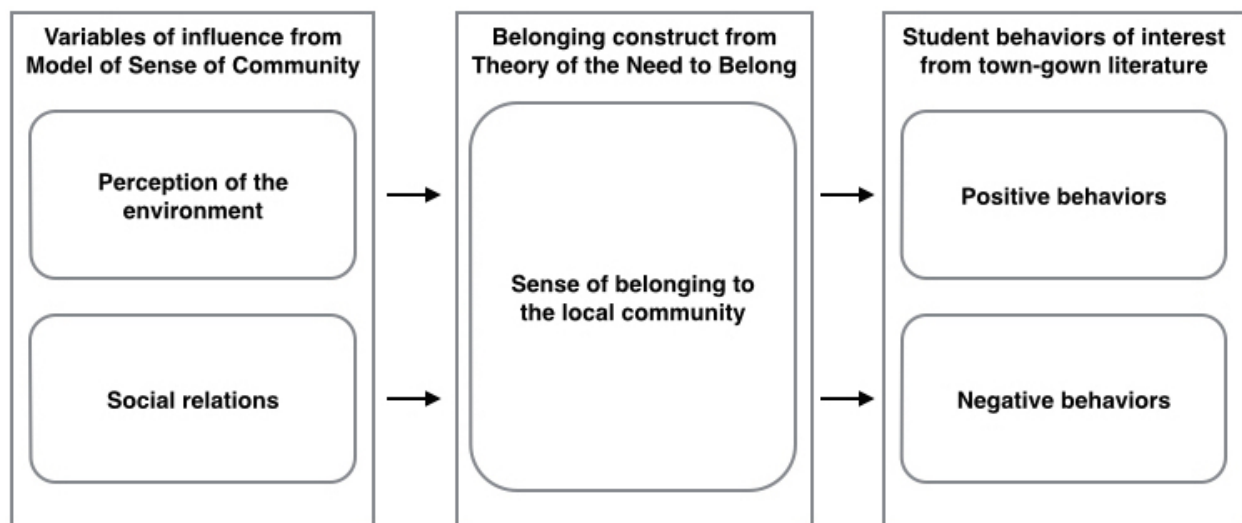


Figure 1. Blended Conceptual Framework

In the construction of this conceptual framework, there was merit in thinking the belonging construct, as captured in the need to belong, could provide insight into student behavioral choices because the need to belong was known as a fundamental human desire capable of motivating behavior. Use of the belonging construct provided an opportunity to examine how belonging influenced positive and negative behaviors within the community. Insight into the role belonging played in motivating behaviors was needed for designing educational approaches aimed at increasing positive community investment while decreasing the occurrence of negative behaviors central to town-gown tensions.

Given the motivating role sense of belonging has had on behaviors, there was worth in

also examining factors that influenced an individual's sense of belonging. The model of sense of community guided the selection of variables to explore for their ability to influence sense of belonging to a community. Examining these variables created the opportunity to ascertain the influence each variable had on belonging and whether the nature of the influence was positive or negative, that is contributed to or detracted from, sense of community. With understanding of the effectiveness and nature of influence associated with each variable, there is opportunity to be intentional with future efforts and strategies to influence sense of belonging in community.

Research Questions

With a research study focused on examining off-campus students and their behavioral choices in the local community, the theories of the need to belong (Baumeister & Leary, 1995) and sense of community (McMillan & Chavis, 1986) guided the conceptual design of the current research. Given this purpose, the following research questions steered the current study:

1. What is off-campus students' sense of belonging to the local community? And, to what extent do demographic characteristics and residential density contribute to the prediction of off-campus students' sense of belonging to the local community?
2. To what extent do environmental, social, and behavioral factors contribute to the prediction of off-campus students' sense of belonging to the local community?
3. What is the relationship between sense of belonging in off-campus students and their involvement in positive behaviors (e.g., neighborhood involvement, responsible neighbor) and negative behaviors (e.g., alcohol violations, litter, fights) within the local community?

Significance of the Research Study

The current study sought to advance higher education research and scholarship in several

ways. The study aimed to provide insight into the off-campus student population as a population of students not previously studied empirically in higher education. Instead, off-campus students have historically been included in the commuter student population, which is problematic because they are not accurately reflected in the broad, homogeneous definition of commuters. Additionally, the focus on off-campus students adds to belonging literature in higher education because off-campus students have not been studied previously with regard to sense of belonging. Existing sense of belonging literature in higher education has also focused on examining the relationship of belongingness toward or within the university and associated college community (Strayhorn, 2012). In the current study, examining students' sense of belonging to the local community opened inquiry into the role feelings of belonging to external entities beyond the university may play in the collegiate experience of students.

In the town-gown context, the review of relevant literature revealed minimal research addressing the town-gown relationship between a university and community. Although a small amount, most existing literature focused on the role of universities and communities in addressing benefits and challenges of the town-gown relationship including economic development, public service demands, resource allocation, and cultural and intellectual benefits (Mullins & Gilderbloom, 2002; Nichols, 1990). A limited number of studies examined the experience and feelings of individuals in and toward the town-gown environment, including university administrators, city administrators, and non-student residents (Bruning, McGrew, & Cooper, 2006; Kittle, 2005). McLaughlin (2011) examined the effect of a specific community building program for off-campus students and its influence on neighborhood outcomes. The current study added to the town-gown literature by focusing on students and bringing to light the sense of belonging these students feel toward their local community.

A compliment to the research contributions of the current study was the practical additions offered to administrators engaged in town-gown relations work on behalf of the university and the local community. Insight into the sense of belonging of off-campus students provided additional understanding of the nature of the off-campus living experience and suggested ways practitioners can enhance services and resources designed to support this population. As important, understanding how sense of belonging influenced behaviors in off-campus students provided direction for addressing student behavior issues and lessening town-gown tensions.

Definition of Terms

To aid in better understanding the context of the current study, defining the key terms was important. At the center of the current study was the student population captured in the term, *off-campus students*. As a term, off-campus student describes an undergraduate student who lives off-campus in the local community where the institution of higher education is located. Off-campus students typically reside in neighborhoods or geographic areas characterized by a large density of student residents and may also include non-student neighbors (McLaughlin, 2011). These students are typically of traditional college age (i.e., 18-22 years) and most have lived on-campus in residence halls at least one year in compliance with a first-year student residency requirement (Hintz, 2011). An off-campus student is likely to live in a rental property, may live alone or with peers, and may walk or drive to campus (Kuh, 2003; Kuh, Gonyea, & Palmer, 2001). Typically, off-campus students have limited experience living off-campus with minimal oversight and are unfamiliar with the guidelines, expectations, and policies associated with community living (Hintz, 2011). As a result, off-campus students are at the heart of town-gown tensions due to student behaviors locally.

Off-campus students have traditionally been subsumed under the term *commuter student* or *commuters* in existing literature. The term commuter students or commuters is used to describe undergraduate students who do not live in institution-owned housing. As a term, commuter encompasses a broad diversity of students and does not differentiate between any subgroup differences in the population (Dugan et al., 2008). Traditional and non-traditional age, full and part-time enrollment, and commuting distance to campus are just a few descriptors used to portray the commuter population (Jacoby, 1989, 2000a).

The presence of off-campus students in the local community has caused an increased focus on and effort dedicated to town-gown relations. The term, *town-gown* is used to describe the relationship between “institutions of higher learning and the communities in which they reside” (International Town-Gown Association, 2013a). Universities and communities have a significant influence on each other, both directly and indirectly, in ways beneficial and detrimental to the health of the shared university community. Positive effects include economic and cultural benefits, educational opportunities afforded, and shared resources and opportunities across entities (Nichols, 1990). Negative effects stem from power struggles between leadership of both universities and communities; resource disparity toward infrastructure demands related to parking, road maintenance, and safety; and student behaviors associated with parties, alcohol consumption, and littering cause quality of life concerns for the community (Nichols, 1990). The current study focused specifically on the student experience in the town-gown context.

Conclusion

Chapter 1 served to introduce the current study, which focused on town-gown tensions between a university and community resulting from student behavior concerns attributed to off-campus students. Compelled to alleviate town-gown tensions, institutions discover off-campus

students have been subsumed within the broader commuter population and have not yet been studied as an independent group. The current study sought to address this knowledge gap by examining the off-campus student population, their sense of belonging to the local community where they reside, and factors influencing belonging. Utilizing sense of belonging provided an opportunity to examine how belonging motivates behavioral choices and in turn, how cultivating belonging may help alleviate behavior issues central to town-gown tensions.

Document Overview

Chapter 1 provided an overview of the research problem and questions guiding the current study of off-campus students and their behavioral choices within the local community, as well as explained the significance of the study in this area. Chapter 2 explores literature pertinent to the current study, namely in the areas of town-gown relations, the commuter student population, and sense of belonging. Chapter 3 details the methodology of the current study. Chapter 4 organizes the findings of the study around the research questions guiding the study. Chapter 5 discusses the results of the current study and offers implications for research and practice in higher education.

CHAPTER TWO

Literature Review

Off-campus students have been largely absent from higher education literature and as a result, little is known about the nature of their experience from a place of residence in the local community. This limited knowledge is concerning because off-campus students are embroiled in town-gown tensions and information is needed to better support these students and to begin to address the tensions at hand. This literature review was designed to situate the current study within existing literature, thus this chapter is divided into three parts reflecting literature on the town-gown relationship, commuter students, and the need to belong. The first section focuses on town-gown literature by exploring student behavior concerns in the context of the town-gown relationship and the challenges and benefits inherent within. The second section provides an overview of the commuter population including its diversity, limitations of the commuter definition, challenges and unique needs, and justification for further study of commuters. The third section examines belonging literature to provide greater insight into the theoretical construct framing this study and to shed light on existing belonging research in higher education.

Town-Gown Literature

The initial section of the literature review serves to introduce and explore the innate relationship in town-gown interactions between a university and local community. The review depicts the benefits and challenges inherent within the town-gown relationship and explores the tensions elicited by student behavior issues in the community. The context of town-gown relationships is examined as population size and characteristics of the university and local community can influence the significance of the town-gown relationship and the salience of the tensions caused by off-campus students. The section concludes with a focus on efforts used by

universities to respond to student behavior concerns, which are central to town-gown tensions.

The review of town-gown literature is essential in establishing an understanding of the context and relationship that make off-campus students a population of significant interest to both the local community and the university, and thus the population of focus in the current study. Furthermore, an understanding of the interdependent nature of the town-gown relationship provides a rationale for why universities invest fiscal and human resources in town-gown work related to off-campus students, as a response to existing tensions, and a responsibility to the long-term health of the town-gown relationship.

The Town-Gown Relationship

The term “town-gown” refers to the distinct spheres differentiating the university, or “gown”, from the lay people of the community, or “town” (Mayfield, 2001; Thelin, 2004). Dating back to medieval Europe, the town-gown term highlights the distinction between the university and the community and implies a tension or conflict between them. As Kemp (2013) explained, the “misunderstandings between these parties can be traced to historical developments and a lack of general understanding of the implications that these developments have on each other” (p. 1). The history of interactions between the university and local community is marked with issues evolved from separate governing bodies, competing priorities and loyalties, and limitations of a shared physical geography (Baker-Minkel et al., 2004).

Despite the challenges associated with the town-gown relationship, the university and community are linked in an interdependent relationship where the well-being of one entity affects the well-being of the other and only at their own peril do they ignore one another or act alone (Freeland, 2005). The interdependent relationship is evident as the university contributes to the economic vitality of the community through its academic and operating activities and in

turn, the economically vibrant community demonstrates the viability of the region and helps the institution attract and retain high-quality students, faculty, and opportunities (Porter & Grogan, 2002/2013). Together, as Porter and Grogan (2002/2013) explained “greater economic vibrancy and more successful academic institutions will in turn contribute to the competitiveness of the broader urban and regional economy” (p. 223). The significance of this interdependence was evident in the resilience of town-gown environments following the 2009 financial crash in the United States (Florida, 2013). Despite this financial turbulence, “college town” environments experienced low unemployment rates, high-paying job markets, growth in entrepreneurial start-ups, and a stable economy when compared to communities without the presence of a higher education institution (Florida, 2013). The well-being of the university and the local community are linked for the betterment of each entity individually and the shared environment.

Benefits and Challenges of the Town-Gown Relationship

The review next explores the benefits and challenges inherent in the interdependent relationship between the university and the community. The shared commitment toward the well-being of the town-gown relationship drives both the university and the community to work toward promoting the health of the relationship and to address challenges that arise.

Benefits of the town-gown relationship. The interdependent nature of the town-gown relationship yields positive effects for the university and local community. As a beacon of academic enterprise, a university provides the local community with opportunities for educational enrichment, cultural experiences, and entertainment (Baker-Minkel et al., 2004; Warfield, 1995). The university attracts a diverse, youthful student population to the region which fosters an energetic, dynamic, and cosmopolitan atmosphere attractive to residents and visitors (Gumprecht, 2003). Students actively fulfill employment, internships, and volunteer

needs for local businesses, schools, and service agencies (O'Mara, 2012). The university provides economic benefits including local spending by campus constituents, visitors, and the university itself (Baker-Minkel et al., 2004), serving as a major employer within the geographic region (Nichols, 1990), and fostering the retention of an educated workforce (O'Mara, 2012). University involvement in research and technology transfer yields regional efforts of innovation and entrepreneurship, contributes to talent retention of educated individuals, and attracts top-tier businesses to the region (O'Mara, 2012; Sungu-Eryilmaz, 2009/2013). Together, these benefits contribute to the economic stability and viability of the local community and foster the success and reputation of the university.

The university provides many benefits to the local community and the local community reciprocates. Local municipalities provide infrastructure and public services crucial to university functioning, such as water and sewer services, road maintenance, and public safety services including police and fire departments (Nichols, 1990). Local communities offer amenities such as shopping, dining, arts, and entertainment that are attractive to university constituents and showcase the viability of the region to potential students, faculty, and staff (O'Mara, 2012). Municipal neighborhoods provide viable housing options for faculty, staff, and students. For students, the local community can be a source of employment with local businesses, for engagement in service-learning experiences, and for placement with student teaching assignments or internships (O'Mara, 2012). An aesthetically pleasing, safe, and vibrant local community serves as a recruitment tool for universities seeking to attract talented students, faculty, and staff to the institution and the region.

Challenges of the town-gown relationship. Despite benefits accrued in a town-gown relationship, the relationship presents challenges and is often marred by conflict and tension.

One primary tension stems from financial concerns. As tax-exempt institutions, universities are not required to contribute financially to local municipalities, although some universities provide payments in-lieu of taxes or on a project-by-project basis to offset the cost of municipal services provided to the university (Baker-Minkel et al., 2004). Despite these ad hoc arrangements, municipalities face dwindling financial resources from state and federal sources while experiencing increased costs associated with land use projects and infrastructure demands. Instead of providing financial support, universities “respond by emphasizing the institution’s positive impact on nearby property values, local business activity, and numerous other economic benefits not captured directly in the city budget” (Baker-Minkel et al., 2004, p. 8). This university response fuels tensions and results in quid pro quo arrangements for zoning and development projects instead of mutually beneficial actions (Freeland, 2005).

Beyond economic tensions, frequent complaints emerge related to infrastructure and public service challenges. During the academic year, the university presence is felt in the traffic and parking congestion present on the roadways due to the high volume of students, faculty, and staff traveling throughout the campus and community. Increased demand on roads and streets affects street maintenance departments and police services and adds financial and resource burdens to city budgets (Nichols, 1990). Police, fire, and emergency medical services are in high demand covering routine responses to campus calls and special events like major football games and entertainment events (Martin & Samels, 2006/2013). Universities are frequently blamed for the behavior of students in the local community including parties, noise, and drunken conduct and in turn, are expected to assist with the additional cost of police, fire, and public service staffing needed to respond (Baker-Minkel et al., 2004). With the extra demand on city services, municipalities often seek to assess a fee or request additional funding from universities for

infrastructure and resource needs. Universities experience this request as a “squeezing” for funds instead of a collaborative effort. University and community negotiations regarding human, fiscal, and resource constraints perpetuate a problematic tone and portray a politically challenging environment instead of nurturing the town-gown relationship as an asset.

Student Behavior Concerns

Off-campus students are a vibrant and dynamic part of the town-gown environment as they bring a youthful energy and enthusiasm to the community and contribute as valuable, involved citizens, neighbors, volunteers, and employees. Despite the benefits associated with off-campus students, the persistent presence of negative off-campus behaviors is a central driver of tensions in the town-gown environment and often overshadows the positive contributions of off-campus students. Universities are motivated to resolve these student behavior issues because of their commitment to the town-gown relationship and their investment in helping students to develop as responsible, engaged citizens. Common complaints cited by city staff and neighbors include: excessive alcohol consumption, parties, noise, garbage, litter, parking, over-occupancy in rental property, and acts of vandalism, personal injuries, and disorder (Harasta, 2008; Hubbard, 2009; Munro, Turok, & Livingston, 2009; Young, 2002/2013).

Student behavior issues are predominant in the town-gown relationship in part because of the proliferation of off-campus rental housing in the local community. Over time, off-campus housing has grown as residence hall capacities have not kept pace with growing college enrollments (Munro et al., 2009) and students frequently desire independent living away from university oversight (Nichols, 1990). Because students desire to live near campus, many adjacent residential neighborhoods have been transformed as single family homes are purchased by landlords and converted into multi-unit dwellings for student renters. The influx of rental

properties and student occupants, as Nichols (1990) explains, has caused “deteriorating neighborhoods, contrasts and conflicts with the life-styles of permanent residents, declining property values, and zoning nightmares for city governments” (p. 11). The increased student presence causes noticeable social, cultural, physical, and economic changes to the local area, a process Munro et al. (2009) defined as “studentification” (p.1807). As a change process occurring over time and not as a once and for all adjustment (Munro et al., 2009), “studentification” speaks to the importance of ongoing attention devoted to the evolving presence of off-campus students in the community.

Context of Town-Gown Scenarios

The salience of the concerns generated by student behavior issues in a local community can vary, in part, because of the town-gown context in which the aggressions occur. Although the town-gown relationship is invariably present to some degree in all municipalities in which institutions of higher education are located, the influence of the university on its community is measured in part by its size in relation to the city or town it inhabits. As the university population increases in relation to the city population, Nichols (1990) explained “the greater the impact that the institution will have on the city’s economy, social life-style, cultural environment, and physical environment” (p. 15). In circumstances where the student enrollment comes close to matching or exceeding the city population, the town-gown relationship is operationalized at an organizational level across the institution and city-government and has significant influence on both entities. In contrast, institutions in large urban areas have little influence on the overall city environment and instead the town-gown relationship is based on neighborhood areas geographically influenced by the university presence (Nichols, 1990).

American college towns are a salient example of the significance the town-gown

relationship can take on when the size of the institution creates a considerable influence on the local community. Gumprecht (2008) defined an American college town as “any city where a college or university and the cultures it creates exert a dominant influence over the character of the town” (p. 1). Similar to one another, college towns differ from other cities and regions in fundamental ways because the influence of the collegiate culture is concentrated, conspicuous, and clearly dominant. Using socioeconomic characteristics, Gumprecht (2008) confirmed college towns were fundamentally different from other cities across the United States. The socioeconomic characteristics Gumprecht (2008) found to be uniquely present in college towns are summarized in Table 1.

The socioeconomic characteristics described by Gumprecht (2008) help explain the context making college towns unique and salient environments to observe the fullness of the town-gown relationship. Factors such as the presence of a youthful population, the transient nature of the population from year to year, and the higher incidence of rental and roommate living arrangements demonstrate the influence of the student population on the local community and illuminates the incongruence of these traits with other characteristics found in American college towns, including higher affluence and high cost of living. Munro et al. (2009) emphasized “students have distinctive demographic and economic characteristics - disproportionately young, middle class, with no dependents, and well educated - which broadly remain stable as each cohort replaces its predecessor” (p. 1807). The concentrated influence of college students on the community was significant and lasting, which made college town environments ideal for the study of off-campus students within the town-gown community.

Table 1
Socioeconomic Characteristics Present in American College Towns

Socioeconomic characteristic	Summary description of characteristic
Youthful population	Average median age for college towns in the study was 10 years younger than median age for U.S. On average, more than one third of the town population was 18-24 years old.
Highly educated population	Population was twice as likely to hold a college degree, six times more likely to hold a doctorate than U.S. population.
Residents are more likely to work in white-collar jobs	Few college towns possess heavy industry and as a result the population was half as likely to work in a manufacturing job than the U.S. Instead, the population worked in managerial and professional jobs (50%) and in education (25%).
Comparatively affluent community	Towns are prosperous, unusually economically stable, and have low unemployment rates. Median family income averaged \$10,000 higher than similar places nationwide.
Cost of living is high	Overall cost of living averaged 2.4% higher than U.S., while housing costs averaged 4.5% higher.
Transient place	The population and pulse of a college town rose and fell with academic calendar. Students moved to college as first years, moved between years, and moved away at graduation.
Residents are more likely to rent, live in apartments, and have roommates	Residents were less likely to own homes and more likely to live in multi-unit dwellings or group housing. More than 50% of the study group lived in rental property compared to 30% of the U.S. population. Specifically, 20% lived in group or multi-unit dwellings compared to 2.8% nationally.
Towns are cosmopolitan	Colleges attract students and faculty nationally and internationally and as a result, towns were more ethnically and culturally diverse than comparable cities.
Towns are unconventional places	Compared to the general U.S. population, college town residents were less religious and more likely to: walk or bike to work, listen to public radio, vote for left-wing political candidates, and shop at a food cooperative.
Quality of life is high	Known for lively downtowns, beautiful residential areas, impressive cultural opportunities, ample recreational options, good schools, and safe streets, college towns ranked high on lists of best places to live, retire, or start a business.

University Response to Town-Gown Complaints

The prevalence of student behavior concerns within the local community causes tension in the town-gown relationship and is particularly endemic in a college town environment. The significance of the behavioral concerns and resulting tensions drive the university to respond and address the behavioral issues caused by off-campus students in the local community. Beyond their own intentions to act, the university receives requests and faces pressure from external entities to respond to behavior concerns. Resident complainants call on the university to address student behavior issues through judicial and educational avenues despite the occurrence of the behaviors beyond university boundaries. Municipal government asks the university to contribute to additional costs associated with police and fire response to problems and subsequent public service demands for clean-up (Baker-Minkel et al., 2004; Martin & Samels, 2006/2013; Nichols, 1990). Journalists raise public awareness of town-gown tensions by writing stories depicting the melee caused by student behaviors, the ensuing resident complaints, and the action, or lack of action, taken by either the university or city leadership in response.

In response to complaints and negative publicity, the university invests time and resources in town-gown relations with an aim toward changing public opinion and demonstrating engagement as a collaborative partner with the local community. The Town/Gown Task Force of the University of Florida and City of Gainesville (Young, 2002/2013) and the joint Neighborhood Relations Committee of the City of Williamsburg and the College of William and Mary (Whitson, 2011/2013) exemplify the commitment of universities to town-gown relations with stated goals of being good community partners, improving relationships between entities, and improving the quality of life for all in the town-gown environment. The Community Relations Coalition serves to “build trusting relationships between the communities of East

Lansing and Michigan State University by fostering cooperation and communication between neighbors” (Community Relations Coalition, 2013, About us section). The International Town-Gown Association (ITGA, 2013a) encourages “civic leaders, university officials, faculty, neighborhood residents and students to collaborate on common services, programs, academic research and citizen issues, creating an improved quality of life for all residents, students, visitors, faculty and staff” (Mission and Vision section, para. 2). Similarity in these stated goals demonstrates the consistency of purpose in town-gown relations across multiple university and community contexts.

Universities employ a variety of strategies and approaches in efforts to address town-gown tensions caused by students. Although some approaches are punitive, such as severe penalties and additional police interventions, many more efforts are conciliatory and educational, such as communication campaigns aimed at students (Kaplowitz & Campo, 2004). Great commonality exists in the types of educational programs offered by town-gown offices in the United States as most feature informational campaigns about being good neighbors, partying smart, and raising awareness of city ordinances, neighborhood responsibilities, and city services (Colorado State University [CSU], 2014; Michigan State University [MSU], 2014; The Ohio State University [OSU], 2014; University of Colorado Boulder [UCB], 2011; University of Florida [UF], 2013). Many offices offer conflict resolution and mediation services for students in need of addressing off-campus concerns with neighbors, be they student or non-student residents (CSU, 2014; Whitson, 2011/2013).

Dissemination of educational campaign materials occurs via print publications (e.g., flyers, booklets), robust website platforms, email communications, door-to-door outreach conducted within neighborhoods, and neighborhood events, such as barbecues and ice cream

socials (CSU, 2014; MSU, 2014; OSU, 2014; UCB, 2011; UF, 2013; Whitson, 2011/2013).

Educational efforts are often collaborative involving university and city staff, community members, students, and property managers in the creation and dissemination of information through various avenues. Many programs use off-campus students as peer educators in town-gown outreach to serve as knowledgeable resources, communication disseminators, and community builders among students and community members (Hintz, 2011).

In other cases, coalitions or committees, such as the Community Relations Coalition of Michigan State University and the City of East Lansing, the Joint Neighborhood Relations Committee of the City of Williamsburg and the College of William and Mary, and the Town/Gown Task Force of the University of Florida and the City of Gainesville, were formed to involve multiple stakeholders in the responsibility for town-gown efforts. The hallmark of coalition structures is their strategic design as umbrella entities where the university, city, and other stakeholders share joint responsibility and accountability for town-gown efforts (MSU, 1999). The mutuality of the arrangement ensures ongoing investment and engagement by all entities involved.

A common philosophy serves as a foundational guide for the many strategies and interventions used across the nation to address town-gown tensions caused by students. By and large, efforts balance between increasing awareness of community regulations and expectations, while promoting increasing interactions and rapport building among student and non-student neighbors. Strategies such as neighborhood events and “be a good neighbor” campaigns are intentionally designed to establish channels of communication between residents and to build a sense of community. As McLaughlin (2011) explained, the underlying goal driving these efforts is to “build stronger, more educated, and self-regulating communities” (p. 10) with an end

towards cultivating a sense of community, promoting greater harmony among neighbors, and ultimately decreasing town-gown tensions. Efforts are aimed at cultivating a sense of belonging to the community with an intention positive community outcomes around behavior and participation will be elicited. Ultimately, the goal is for individuals to become more invested and engaged in the local community, leading them to be more respectful and responsible citizens.

Summary of Town-Gown Literature

The town-gown literature review has demonstrated the dynamic, interdependent nature of the relationship between a university and local community. Benefits of the town-gown relationship range from economic stability to expansive cultural, social, and educational opportunities, while challenges stem from infrastructure demands, resource challenges, and student behavior complaints. Student behavior issues emerged as a consistent complaint among stakeholders and served as a central focus of university attention toward and investment in repairing town-gown tensions. The link between geographic context and significance of the influence of student behavior issues on the town-gown relationship was examined and revealed the salience of the American college town environment for study of student behavior issues. In the university response to student behavior concerns, the notion of cultivating a greater sense of community belonging to elicit positive community outcomes emerged as an underlying driver influencing town-gown efforts. Next, the literature review turns to commuter literature, given the current study focused on off-campus students as central actors in town-gown tensions and off-campus students have long been categorized within the commuter population.

Commuter Literature

The review of commuter literature begins with further examination of off-campus students as central actors within the town-gown relationship and illustrates the existing affiliation

with the commuter student population. Next, the commuter definition is reviewed and its limitations are discussed considering the known diversity of the commuter population. Then, the challenges and unique needs of commuter students are examined, followed by a call for further understanding of the diverse commuter population, including off-campus students.

Off-Campus Students

The current study focused on undergraduate students who live off-campus in the local community and are at the heart of town-gown tensions between universities and local communities. Off-campus students represent an increased segment of the local community as undergraduate enrollments have grown and university residential facilities are unable to accommodate the increase (Munro et al., 2009). The growing presence of off-campus students in the local community intensifies the student influence on the community dynamic and makes their actions conspicuous and noticeable by city administrators, community residents, neighborhood leaders, and police. Consequently, off-campus students are central to town-gown tensions because behavior concerns such as parties, litter, noise, excessive alcohol consumption, and disorderly conduct drive resident complaints, fuel municipal demands for resources, and elicit negative media coverage of the university (Hintz, 2011; McLaughlin, 2011; Nichols 1990).

Universities invest resources and staffing in town-gown relations to address problematic off-campus student behaviors and issues. However, administrators working in town-gown relations quickly discover an absence of information about off-campus students and the nature of their college experience from a place of residence in the local community. The limited information known about off-campus students identifies them as being traditional college aged, living alone or with peers in rental housing, and attending college full-time (Gumprecht, 2003, McLaughlin, 2011). Off-campus students are known to have lived in residence halls at least one

year, only recently moved off-campus, and have minimal experience with living on their own without oversight or guidance from parents or university staff (Hintz, 2011). Beyond these descriptive characteristics, the information known about off-campus students is limited to the disruptive behaviors central to town-gown tensions.

A primary obstacle limiting knowledge of off-campus students stems from their historical inclusion within the commuter student population in higher education. Off-campus students have traditionally been defined as commuter students based on the trait of not living in institution-owned housing (Jacoby, 1989; Stewart & Rue, 1983). However, most off-campus students are not accurately reflected in the characteristics associated with commuters because the commuter definition is antiquated and does not reflect the known diversity within the commuter population. As a result, further insight into the off-campus student population is needed but first requires additional understanding of the definition and concept that has historically defined the commuter population and included off-campus students. The next sections explore the commuter population in greater detail beginning with the commuter definition and its limitations.

Definition and Diversity of the Commuter Population

In American higher education, commuter students comprise 84% of the undergraduate student body population nationally and are enrolled in all segments of the higher education system including two-year, four-year, public, and private institutions (National Center for Educational Statistics [NCES], 2010). The commuter population represents a growing presence on college campuses, yet commuters remain the overlooked majority among the student body. The term commuter refers to any student who does not reside in institution-owned housing on campus (Jacoby, 1989; Stewart & Rue, 1983). As defined, the commuter term is based on a single criterion of residence off-campus, which has meant research and practice have

traditionally treated commuters as a homogenous group in comparison to their residential counterparts (Astin, 1977, 1993; Pascarella et al., 1993). Reliance on the homogenous commuter definition perpetuates the myths labeling all commuters as either “townies” assuming their place of residence to be at home with parents, or assuming commuters are apathetic and uninterested in the college experience (Jacoby, 2000b; Stewart & Rue, 1983).

This broad definition and limited concept of commuters is problematic because it overlooks the diversity of needs and experiences within the commuter population (Jacoby & Garland, 2004) and fails to account for variance in factors such as age, enrollment status, and commuting distance (Kodama, 2002; Kuh et al., 2001). The commuter population is diverse and can be described by characteristics including traditional and non-traditional age, part and full-time attendance, native or transfer status, independence or dependence as related to parents, employment status, and commuting distance to campus (Council for the Advancement of Standards in Higher Education [CAS], 2012; Kodama, 2002; Kuh et al., 2001; Stewart & Rue, 1983). In higher education, commuter students represent an increase in the commuter proportion of the student population and an expanding diversity among the student body. As such, further understanding of the diversity within the commuter population is warranted and needed.

Challenges and Unique Needs of Commuters

The practice of commuting most notably influences the educational experience for commuter students (Jacoby & Garland, 2004). Commuter students face challenges that place demands on the time and energy they have for their educational experience. In addition to being students, commuters often work to defray the costs of higher education and to provide support for others as parents or caregivers (Kuh, 2003; Silverman, Aliabadi, & Stiles, 2008). Commuters share concerns with transportation, including parking, traffic, vehicle maintenance, and cost

(Jacoby & Garland, 2004). Keeling (1999) described commuter students as “reinvented” students, emphasizing the complexity of students’ lives managing multiple roles as employees, parents, partners, and caregivers and underscored ‘student’ is no longer every students’ primary identity (p. 4). The practice of commuting complicates the balancing act for students and stresses the need for adequate support structures within the institution and beyond.

Demands of employment and multiple roles compete for a commuter student’s attention and influence the amount of time, energy, and commitment given to academics. Competing responsibilities mean commuters spend little time on campus overall and what time they do spend is typically associated solely with class time (Krause, 2007). Compared to residential peers, commuters are less involved in academic and social systems of an institution (Astin, 1977, 1993; Pascarella et al., 1993; Tinto, 1993), have less access to campus resources and services (Krause, 2007), and fewer opportunities to develop relationships with faculty and peers because they spend less time on campus overall (Jacoby & Garland, 2004). Given these obstacles, commuters report a greater sense of marginality and a lessened sense of belonging to the university (Jacoby & Garland, 2004; McLaughlin, 2011; Silverman et al., 2008). A lessened sense of belonging is concerning because belonging is linked to positive college outcomes including achievement, retention, and persistence (Hausmann et al., 2009; Rhee, 2008).

Despite the diversity of the commuter population, a common core of needs and concerns was identified (Jacoby, 2000b). Key among them is the need to develop a sense of belonging to the institution from addressing basic environmental needs such as lockers and lounges to facilitating more intentional opportunities to engage with peers and faculty (Silverman et al., 2008). Cultivating a sense of belonging helps commuters to “feel wanted” by the institution and reduces feelings of marginality through the establishment of relationships and connection to

others (Jacoby, 1989, p. 6). Commuter students need assistance identifying and integrating support systems into their educational experience (Jacoby, 2000a) as most existing support systems are found in off-campus relationships with friends, family, and coworkers. Although these support systems are important, often commuters must negotiate responsibilities, priorities, and commitments related to academics and life roles with these same individuals. The realities of support system complexities and belonging needs underscore the importance of the university role in assisting commuters to establish relationships with staff and advisors who can aid in promoting campus engagement and access to resources and services (Jacoby, 1989).

Need for Further Understanding of the Commuter Population

The known challenges and needs of commuters merit the attention of those in higher education. If all students are to achieve maximum growth and learning in college, institutions must expand their understanding of the commuter population and look to offer support commensurate with the diversity within the commuter population. Krause (2007) argued institutions must make efforts to ensure commuter voices are heard so their needs can be “integrated into the structure of the institutional fabric at the classroom, academic department, and broader institutional level” (p. 42). Dugan et al. (2008) caution against the “continued utilization of programs and interventions designed for residential students with commuter student populations, under the assumption that the effect on learning will be equivalent” (p. 283).

Yet, the dominance of the residential tradition continues to shape policies and practices in higher education because research and practice have not kept pace with the changing commuter population as it has diversified and grown. Continued reliance on a homogenous concept of commuter students has allowed institutions to ignore the possibility within-group differences may exist (Dugan et al., 2008; Kodama, 2002; Roe Clark, 2006) and has hampered efforts to

ensure all commuter students get the support needed to be successful in college. Further study of the commuter population is warranted and needed if universities intend to offer every student equitable access to the college experience regardless of place of residence (CAS, 2012).

As exemplified in the context of town-gown relations, an ongoing reliance on the antiquated commuter concept has equated to an absence of information about off-campus students and an unfamiliarity with how the college experience of off-campus students may be similar or distinct from that of the traditional commuter population. As a result, efforts to address town-gown tensions and to adequately support off-campus students are hampered without empirical understanding of the off-campus student population. As such, the current study focused on gaining insight and understanding of the off-campus student population and their collegiate experience from a place of residence in the local community.

Summary of Commuter Literature

The commuter literature reviewed introduced off-campus students as central actors within the town-gown context and illustrated their historical inclusion within the commuter population. Further review of commuter scholarship explained the antiquated, homogenous definition of commuter students in light of the growing presence of a diverse commuter population in higher education. Challenges facing commuters included balancing multiple-life roles and employment in college, while needs included gaining a sense of belonging and establishing support structures to aid in campus involvement and integration. The limited understanding of the diverse commuter population coupled with known challenges and needs of commuters warranted a call for universities to support all students equally, regardless of place of residence. Further study of off-campus students was warranted and drove the purpose of the current study, as the absence of insight on off-campus students hampers efforts to address town-gown tensions and to adequately

support these students. Next, the literature review focuses on belonging literature to establish a deeper understanding of the conceptual framework employed in the current study.

Conceptual Framework Literature

The final segment of the literature review focused on belonging literature in higher education as the basis for the theoretical framework used to examine students' behavioral motivations in the local community. The review begins with an overview of the theories of need to belong (Baumeister & Leary, 1995) and sense of community (McMillan & Chavis, 1986) as they formed the blended theoretical foundation for the study. Then, each theory is discussed with regards to the selection of variables used in the study. The section concludes with a review of belonging literature in higher education and identifies the contribution of the current study.

A Blended Framework: Need to Belong and Sense of Community

The theoretical framework for the current study was built on two distinct, but related theories, the theory of the need to belong (Baumeister & Leary, 1995) and the theory of sense of community (McMillan & Chavis, 1986). Both theories focus on the human desire to belong to a group or community and consider influences and outcomes of belonging. The theory of the need to belong provided a construct to examine how the desire to belong served to motivate behavior in students, while the theory of sense of community designated factors to consider for their ability to influence belonging in a community. The following overview provides insight into the theoretical underpinnings of each theory and discusses their use within the current study.

Theory of the need to belong. The primary conceptual anchor for the current study was the theory of the need to belong as framed by Baumeister and Leary (1995) as a fundamental human motivation. Specifically, the drive to satisfy the innate human need to belong is what elicits affective responses and behaviors. The authors demonstrated the need to belong was a

powerful construct capable of producing emotional, behavioral, cognitive, and health outcomes among humans. Utilized in higher education, the need to belong construct is conceptualized as a sense of belonging construct and similarly noted for its ability to motivate and influence behavior (Strayhorn, 2012). In college, sense of belonging refers to a student's perceived social support, feelings of mattering, and being connected to the campus community and others on campus including students, faculty, and staff. Framed in this manner, sense of belonging is a cognitive evaluation an individual makes with regards to their sense of identification in relation to a group or community. As such, the desire to have a sense of belonging is a pervasive psychological need and the drive to satisfy this need is what elicits affective responses and behaviors. In education, satisfying the need to belong leads to positive, productive outcomes including engagement, achievement, retention, persistence, optional functioning, and well-being (Hausmann et al., 2009; Rhee, 2008; Strayhorn, 2012).

In the current study, the motivating capacity of the need to belong was of key importance. As previously described, there are multiple positive outcomes known to be elicited from achieving a sense of belonging. Thus, there was merit in exploring how belonging might motivate off campus students' behaviors. In the past, studies of college student belonging have largely focused on belonging to the university or community entities within. The emphasis of the current study on the town-gown context and the local community environment created a need for a second theoretical component to shed light on the role of belonging to a community external to the university. The theory of sense of community (McMillan & Chavis, 1986) and corresponding model (Chavis & Wandersman, 1990) provided the needed theoretical lens for examining the local community context.

Theory of sense of community. The theory of sense of community (McMillan &

Chavis, 1986) is closely related to the notion and concept of the need to belong as both pertain to the interpersonal connections individuals desire and feel in relation to others. McMillan and Chavis (1986) 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” (p. 9). Defined in this way, McMillan and Chavis (1986) identified four essential elements in the generation of sense of community and described them as:

- membership: the 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
- shared emotional connection: the commitment and belief that members have shared and will share history, common places, time together, and similar experiences

Taken together, the authors intended for the four elements to reflect the intimate, dynamic nature of the development and maintenance of a sense of community.

Based on McMillan and Chavis' (1986) definition and concept of sense of community, Chavis and Wandersman (1990) designed and tested a model of sense of community. The model illustrated the catalytic effect sense of community has on *local action* (e.g., voluntary participation in a neighborhood association) by affecting an individual’s *perception of the environment, social relations, and perceived control and empowerment* within the environment. The direction of causal influence of these variables was shown to be bidirectional and transactional, as illustrated in the model when sense of community was found to be a cause and

result of local action. In the current study, the variables identified in the model as perception of the environment and social relations are of key interest given their ability to influence and be influenced by sense of community.

Application of the Conceptual Framework in the Current Study

The conceptual overview of the theories of the need to belong (Baumeister & Leary, 1995) and sense of community (McMillan & Chavis, 1986) has demonstrated the significance of the desire for belonging in humans and shown the desire is sufficient to motivate behavior and action in individuals. With this conceptual foundation established, the following section delineates how both belonging theories were utilized in the design of the current study and the selection of variables for study. The variables of interest corresponded with the research questions below that guided the current study:

1. What is off-campus students' sense of belonging to the local community? And, to what extent do demographic characteristics and residential density contribute to the prediction of off-campus students' sense of belonging to the local community?
2. To what extent do environmental, social, and behavioral factors contribute to the prediction of off-campus students' sense of belonging to the local community?
3. What is the relationship between sense of belonging in off-campus students and their involvement in positive behaviors (e.g., neighborhood involvement, responsible neighbor) and negative behaviors (e.g., alcohol violations, litter, fights) within the local community?

Examining sense of belonging. The first and second research questions focused on the sense of belonging off-campus students have toward the local community. In higher education, Strayhorn (2012) indicated sense of belonging relates to the satisfaction of a psychological need

to belong, such that students' desire a "feeling or sensation of connectedness, the experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group (e.g., campus community) or others on campus (e.g., faculty, peers)" (p. 3). As such, variables designed to measure off-campus students' sense of belonging to the local community reflected the psychological need to belong by focusing on perceptions of connection students perceived in the local community.

Determining factors of influence on belonging. The second research question reflected an intention to examine factors of potential influence on off-campus students' sense of belonging to the local community. Given the important linkages established between belonging and positive outcomes of success (e.g., achievement, well-being), there was worth in determining which factors influenced belonging and whether the factors contributed to or detracted from the sense of belonging a student felt. This understanding of the influence of various factors could enhance university efforts to cultivate belonging and promote success outcomes in students. In selecting factors to consider for an ability to influence belonging, the model of sense of community (Chavis & Wandersman, 1990) provided the following variables for consideration in the current study:

- *perception of environment* refers to an individual's judgements about the environment (e.g. perceived qualities of and satisfaction with environment) and the "degree to which the environment is positive or negative to the individual" (p. 57),
- *one's social relations* refers to interactions among neighbors, such as informal visiting and borrowing or lending tools, in which neighbors provide each other "emotional/personal, instrumental, and informational support" (p. 58).

The third construct, namely the perceived control and empowerment items, were not used

because the focus of the study did not extend to understanding student agency or empowerment.

Examining sense of belonging and student behaviors. The final research question centered on examining the relationship between sense of belonging and student participation in positive and negative behaviors within the town-gown context. As previously explained, the need to belong (Baumeister & Leary, 1995) is a fundamental human motivation and the drive to satisfy this pervasive need to belong elicits affective behaviors and responses. The definition and conceptual grounding of the need to belong provided the rationale for examining the relationship between the need to belong and behavior in off-campus students. With regards to specific behaviors of interest in the current study, the identification of positive and negative behaviors to examine was informed by town-gown literature and practice.

Sense of Belonging Literature in Higher Education

Having articulated the conceptual framing of the current study and delineated the use of the theoretical components in the selection of variables, the following section next reviews sense of belonging literature within higher education. An overview of existing literature provides insight into prior use of the theory of sense of belonging within higher education research and captures the known findings and outcomes associated with the research.

Studies of underrepresented students. Within higher education, Hurtado and Carter (1997) examined sense of belonging in relation to student persistence. Their study examined the extent Latino students' background characteristics and college experiences in the first and second years contributed to sense of belonging in the third year. The findings of the study identified significant positive relationships between sense of belonging and a variety of academic and social activities, including peer tutoring and student organization involvement. Perceptions of a hostile racial climate had a negative effect on the sense of belonging of the Latino student

participants. The authors found considerable variability in sense of belonging among students, which was attributed to the differences in students' perceptions of campus climates for diversity.

Building on the work of Hurtado and Carter (1997), Hausmann et al. (2009) examined the effects of sense of belonging on persistence for Caucasian and African American first-year students. The study revealed sense of belonging had direct effects on institutional commitment and indirect effects on intentions to persist and actual persistence. The effects of belonging were comparable for Caucasian and African American students for sense of belonging on institutional commitment, intentions to persist, and actual persistence. An experimental intervention included in the study was designed to promote sense of belonging in an intervention group with the distribution of correspondence and gifts emphasizing the value of students as university community members. Findings revealed the interventions positively influenced Caucasian students but had no effect on African American students. Although specific strategies may differ for various groups of students, the study demonstrated individual campuses could influence sense of belonging and persistence through low-cost and easy to implement interventions.

In continued use of the sense of belonging construct with students of Color, Johnson et al. (2007) expanded on Hurtado and Carter's (1997) framework by studying African American, Asian Pacific American, Hispanic/Latino, and Caucasian first-year students. The findings revealed students of Color perceived a less strong sense of belonging than their Caucasian peers. Students of all races and ethnicities who experienced a smooth transition to college perceived a strong sense of belonging to campus. Findings related to perceptions of residence hall climate, college transition, and campus racial climate suggested the shared responsibility between students and their institutions for successful integration into the college community.

Studies of additional student demographics. Turning to another component of student

demographics, Ostrove and Long (2007) examined how social class background influenced sense of belonging in college and had implications on college adjustment outcomes such as integration and performance outcomes. Findings showed class background strongly related to students' sense of belonging, which positively mediated social and academic adjustment, quality of college experience, and academic performance. Findings suggested universities address collegiate adjustment challenges of students from low social class backgrounds by cultivating belonging with a welcoming, inclusive campus climate.

Kember, Lee, and Li (2001) studied the experience of part-time college students noting most existing belonging research had focused on full-time students. The authors explored whether part-time students had a sense of belonging and if so, the source of that belonging (i.e. faculty, peers, academic department) and factors contributing to their belonging. Findings suggested most students had a strong or developing sense of belonging and subsequently identified class groups, faculty interactions, and departmental affiliation as the source of their belonging. The authors offered strategies to foster belongingness, including increasing faculty-student interactions, focusing on initial academic experiences, and providing quality teaching.

Studies of the environment. Expanding beyond studies of student characteristics, researchers have examined how factors of environment relate to sense of belonging. In conjunction with their study examining sense of belonging with students of Color, Johnson et al. (2007) also wanted to understand how perceptions of the residence hall environment related to sense of belonging. The findings showed for students of all racial and ethnic backgrounds, sense of belonging was strongly related to perceptions the residence hall climate was socially supportive or tolerant of diversity. Residence halls appeared to be a compelling environment for cultivating students' sense of belonging because of the relationships formed and experiences

gained living in a residence hall. As such, the authors suggested the value of residence hall settings came from the mutual responsibility students and staff share for fostering a living environment culturally inclusive and supportive of all people.

Continuing a focus on environments, Freeman, Anderman, and Jensen (2007) examined sense of belonging at class and campus levels for first-year students. At the class-level, they examined associations between sense of belonging, class motivation, and characteristics of effective teaching. At the campus-level, they examined how class-level belonging contributed to campus-level belonging. Findings showed class-level belonging was an academic motivator for first-year students and specific teaching practices, such as encouraging student participation and instructor warmth, were strong contributors to belonging. At the campus-level, findings showed class-level belonging did not contribute to overall campus-level belonging, but instead students' sense of social acceptance was the largest contributor to campus belonging. In future research, the authors called for the use of multiple data sources to better capture the dynamics of class-level belonging processes and suggested better defining the relationship between class and campus levels of belonging.

In the review of belonging literature in higher education, one commonality among all the studies reviewed was an emphasis on sense of belonging and affiliation to the university campus community and student relationships within this environment with peers, faculty, and staff. This emphasis on a university centric focus was logical given the importance of understanding how belonging influences the collegiate experience of students and ultimately influences outcomes of interest within college, including achievement, retention, and persistence. However, the absence of understanding how students' feelings of belonging relate to communities and contexts external to the university negates the reality that many students, particularly commuter and off-campus

students, blend experiences across university and community contexts as they navigate their academic, residential, work, and social experiences. To better support off-campus students fully in college, there was value in examining the sense of belonging and affiliation these students feel to the local community where they reside and engage during their collegiate experience. Thus, this study focused specifically on the sense of belonging students felt toward the local community where they reside and examined how belonging influenced behaviors in the town-gown context.

Summary of Conceptual Framework Literature

The purpose of the conceptual framework literature review was to explain the use of the theories of need to belong and sense of community as the theoretical framework for the current study and to explore existing belonging literature. The review began with an overview of the concept and core elements of each theory to emphasize the strength of the desire for belongingness as a fundamental human motivation. Next, the contributions of each theory were delineated with regards to the selection of variables in alignment with the research questions guiding the current study. Lastly, the review of belonging literature revealed prior use of sense of belonging in higher education research with regards to underrepresented students, part-time students, and environmental factors.

Contribution of the Current Study

The current study sought to advance higher education research and practice in multiple ways. Within the context of town-gown practice and scholarship, the current study advanced knowledge of off-campus students as central stakeholders in the town-gown relationship and provided empirical understanding of this understudied portion of the student population. The examination of off-campus students also provided insight into the sense of belonging and

affiliation these students feel toward the local community and offers practitioners perspective on the influence of sense of belonging on students' behavioral choices.

Within commuter scholarship, the current study responds to the call for additional study and delineation of the diversity within the commuter population with an examination of off-campus students. In addition to advancing understanding of the demographic composition of the off-campus student population, the current study provides practitioners with insight regarding the similarities and differences between off-campus students and the broader commuter population. Lastly, within sense of belonging literature, the focus of the current study on the local community advances understanding of the role of sense of belonging in a context and environment external to the university. The current study expands the use of the sense of belonging framework with examination of factors capable of influencing belonging and the examination of the role of belonging in eliciting positive and negative behaviors in students.

Summary of the Literature Review

The literature review focused on relevant literature along the three main themes of town-gown relations, commuter students, and sense of belonging, to identify the context and need for the current study. The review of town-gown literature introduced off-campus students and detailed the concerns and challenges associated with these students in the town-gown context. Further exploration of the dynamic, interdependent town-gown relationship provided justification for further study of the off-campus student population. The review of commuter literature revealed off-campus students have been traditionally included in the commuter population, which was problematic given the antiquated, homogenous definition of commuters does not reflect the known diversity within the commuter population. The absence of information regarding off-campus students hampers efforts to adequately address town-gown

tensions related to student behavior issues. Lastly, the review of belonging literature offered insight into the use of the theories of need to belong and sense of community as the conceptual framework for the current study. The belonging construct provided opportunity to gauge perceptions of belong with regards to the local community, to ascertain the influence of factors on belonging, and to examine the relationship between belonging and behavior. Next, Chapter 3 will cover the methodology associated with the current study.

CHAPTER THREE

Methodology

This chapter elaborates on the methodology utilized in the current study. The chapter includes a brief statement of the purpose of the study and its guiding research questions. A discussion of the study design, the population and sample selection, data collection procedures, instrumentation, and data analyses are also presented.

Purpose of Study

The purpose of the current study was to examine how sense of belonging served to motivate and influence the behavior choices of off-campus students in the local community. The desire for belonging is established as a fundamental human desire capable of motivating behavior (Baumeister & Leary, 1995) and is utilized in higher education to demonstrate the importance of belonging in helping students feel connected and engaged in college (Hurtado & Carter, 1997; Ostrove & Long, 2007; Strayhorn, 2012). The current study aimed to further student belonging research by using off-campus students as the population of interest and focusing the inquiry on the nature of belongingness felt toward the local community as an environment external, rather than internal, to the university. Furthermore, the current study examined how sense of belonging served to motivate student behaviors in the local community. The focus on student behaviors was chosen within the university-community context because off-campus students are associated with town-gown tensions resulting from student behaviors in the local community. The current study addressed the need for insight on off-campus students, their affiliation to the local community, and their behavioral actions in a town-gown context.

Research Questions

With a research focus on examining off-campus students and their behaviors in the local

community, the following research questions guided the current study:

1. What is off-campus students' sense of belonging to the local community? And, to what extent do demographic characteristics and residential density contribute to the prediction of off-campus students' sense of belonging to the local community?
2. To what extent do environmental, social, and behavioral factors contribute to the prediction of off-campus students' sense of belonging to the local community?
3. What is the relationship between sense of belonging in off-campus students and their involvement in positive behaviors (e.g., neighborhood involvement, responsible neighbor) and negative behaviors (e.g., alcohol violations, litter, fights) within the local community?

Study Design

The current study was quantitative in nature and used a non-experimental survey design. A quantitative approach aligned with the research focus on determining the relationship between variables, namely sense of belonging, factors thought to influence belonging, and student behaviors. A non-experimental design was appropriate given the intent on studying the variables as they existed without manipulation by the researcher (Remler & Van Ryzin, 2011). The use of a survey provided the opportunity to collect data from off-campus students in the spring semester timeframe, in alignment with the notion college students often change residences between academic years making a more longitudinal study of sense of belonging based on geographic location difficult.

The first research question focused on evaluating the sense of belonging of off-campus students, where sense of belonging was the criterion variable and demographic characteristics and residential density categories were predictor variables. The second research question examined the influence of environmental, social, and behavioral factors in predicting sense of

belonging in off-campus students. In this question, sense of belonging was again the criterion variable, while the various factors were the predictor variables. The third research question examined the relationship between off-campus students' sense of belonging and their participation in positive and negative behaviors. In this question, positive behaviors and negative behaviors were the criterion variables, while sense of belonging, demographic characteristics, density, environmental factors, and social factors were the predictor variables.

Institutional and Community Context

The current study examined off-campus students and the relationship between their sense of belonging and behavioral choices within the local community. A review of both the university and the local community contexts was needed to illustrate the town-gown relationship and subsequent tensions resulting from student behavior concerns in the community. Examining the institutional context further explained the focus on off-campus students as the population of interest in the current study, while examining the local community context demonstrated the significance of the presence of off-campus students in the local community.

Institutional Context

The current study was conducted at Michigan State University (MSU) which is a public, research intensive, four-year institution located in East Lansing, Michigan. In the spring of 2016, MSU had a total student enrollment of 48,272 including 36,558 undergraduates, 10,191 graduate and professional students, and 1,533 non-degree seeking students (Michigan State University, 2016). Of the total enrollment, 34,362 were in-state domestic students, 6,618 were out-of-state domestic students, and 7,292 were international students. MSU has a first-year residency requirement for undergraduates and boasts a large residential system housing 16,000 students, including both undergraduate and graduate students. Based on total student enrollment

and known quantity of residential students, an estimated 32,000 students reside off-campus in non-institution owned properties, with the registrar's office further estimating over 15,000 of these off-campus students live in the local East Lansing community. The presence of a large number of students residing in the local community provided an ideal setting to conduct the current study focused on off-campus students and their behaviors within the town-gown context.

The institutional setting was purposely chosen as a residential university within a "college town" community, as distinct from campus settings more rural or urban in nature (Gumprecht, 2003, 2008). The "college town" setting was ideal for this study because the university and local community were such that characteristics and actions of both entities had sufficient influence on one another to demonstrate the intertwined nature of the town-gown relationship. In particular, the college town served as a microcosm in which to observe how a large number of students residing off-campus could influence the local community. Next, a review of the local community context expands upon the town-gown relationship and the role of students residing in a college town.

Local Community Context

The local community provided a context to observe the influence of the town-gown relationship at play in the university and community interactions and the significance of their influence on one another within a "college town" setting. The local community examined in this study was the City of East Lansing, Michigan as the municipality where Michigan State University is located. As such, the influence of the university on the local municipality could be seen in several ways. MSU serves as the major employer within East Lansing with an estimated 11,000 employees in comparison to the next largest employer with 600 employees (City of East Lansing, 2015a). In the 2010 U.S. Census, the local city population was 48,600 people with an

estimated 30,000 individuals between 18 and 24 years old and a disproportionately young median age of residents at 21.6 years in contrast to 38.9 years state-wide (City of East Lansing, 2015b). Most individuals in this age demographic were known to be college students who either lived on-campus in residence halls or in East Lansing within proximity to MSU.

Beyond population demographics, several additional features of East Lansing contributed to its designation as a “college town”. Foremost, the City of East Lansing had a large rental housing stock within the residential community, with 800 rental property owners or managers responsible for over 1,600 licensed properties, ranging from individual houses to apartment complexes (A. Irwin, personal communication, May 10, 2015). These licensed properties constituted 9,500 rental units which equated to 27,000 occupants based on licensed occupancy numbers. The predominance of rental properties within East Lansing reflected the need to accommodate a transient college student population each leasing cycle and demonstrated the sheer number of renters within the residential community. In addition, leasing agreements were designed with students in mind as rental contracts were available as nine-month contracts aligned with the academic year or as 12-month terms beginning and ending near the start of the fall semester. The lease signing cycle was heavily influenced by the institution and its student population with marketing and promotions taking place in October for leases beginning the following August. The timeframe also coincided with MSU’s typical “Live On campaign” designed to recruit students to sign up for on-campus housing for the upcoming academic year (MSU, 2017). This advanced nature of lease signing was reflective of rental companies competing with each other and the university for college student tenants and represented a timing unique to university environments and in advance of traditional rental markets.

Sample Selection

The population of interest in the current study was undergraduate college students who attended MSU and resided off-campus in the City of East Lansing. The population was determined using residential criterion, specifically a current address in the municipal ZIP code of 48823. The term *current address* represented the address the student resides at while attending MSU. Following IRB approval, the researcher submitted a data request to the MSU Office of the Registrar (RO) for the sampling frame to be generated including the first and last name, MSU email address, and street address for undergraduate students with a current address in the 48823 ZIP code in Spring 2016. The researcher received RO approval and an Excel file was generated with 13,927 students meeting the sampling frame criteria. A review of the data revealed 461 cases of students who lived on-campus in the residence halls, but were erroneously included in the data, likely because of an address error entered when each student updated his or her own student directory information. Additionally, 34 cases were students who did not have complete addresses, or the address was not in East Lansing. In total, 495 people were removed from the population, resulting in an adjusted population of 13,432.

From the sampling frame, the sample was drawn using stratified random sampling. The benefit of using random sampling comes from the use of probabilistic methods, which helps to ensure statistical inferences can be drawn, a more representative sample can be achieved, and sampling bias can be minimized (Remler & Van Ryzin, 2011). The use of sampling stratification creates subgroups, or strata, within the sample and allows for comparison between them. In the current study, residential density was of interest as a potential factor of influence in off-campus students' sense of belonging. Utilizing density as a factor allows for examination of how proximity to others in a living environment influenced feelings of belonging. As such, the

stratum created reflected geographic areas of residence characterized as high, medium, and low-density areas of houses and apartments.

To create the strata designations for the study, the researcher worked with the City of East Lansing's geographical information systems (GIS) analyst to map the student address data and discern patterns of high, medium, and low-density residency within East Lansing. Density in the current study represented the number of off-campus students residing in a given land area. The initial step was to map the student address data onto a City of East Lansing map, with each student address represented by a dot on the map as seen in Map 1 in Appendix A. The broad scale of Map 1 made individual address discernment difficult, but did illuminate initial areas of density. To address this challenge and make density calculations possible, a grid was overlaid on the East Lansing map with each grid unit representing the same size, 500 feet by 500 feet. The grid overlay aligned closely with the size of a neighborhood block, while keeping consistent the base unit of land across the entire City footprint. Map 2 in Appendix B depicts the grid overlay on the East Lansing map with student data points included.

With the grid overlay in place, initial density calculations were computed and assessed for clarity and meaning. The analysis revealed a striking difference between density levels associated with houses and apartments, which resulted from the occupant capacity associated with most apartments. Although house density was calculated on the block or grid level, not the individual house level, most apartments were large enough to cover multiple grid units and had sufficient occupants to appear to be high density nearly universally. The result was areas of house density appeared less dense in comparison to apartments, while density calculations for apartments were high at the individual grid level and no overall density calculation existed for the apartment building. Rather than artificially segmenting apartments into smaller grid units,

the decision was made to recognize houses and apartments were distinct types of units and density calculations were determined as such. For areas of houses, density calculations were determined based on number of students within each grid unit of land. For apartments, density calculations were determined based on number of students in relation to the licensed occupancy rate of the apartment building or complex.

Once density calculations were made, the GIS software guided the identification of three levels of density for each unit type (i.e., houses, apartments). The result was six density categories representing high, medium, and low-density areas of both houses and apartments. Map 3 in Appendix C is the map depiction of the density categories using color shading as described in the map legend. Each student was placed in his or her corresponding density category and the six categories became the strata levels for the current study. Map 4 in Appendix D depicts both the shading and student data points. Once strata were identified, a random sample for each stratum was drawn in a number proportional to the stratum's size compared to the population (Remler & Van Ryzin, 2011). These subsets of the strata were then pooled to form the sample frame invited to participate in the current study. The final sample frame was $n = 6,225$, based on an estimated response rate of 6% for an online survey at MSU and a sampling error of 5%. Table 2 shows the adjusted population and sample frame at each stratum level.

Table 2
Adjusted Population and Sample Frame Count at Each Stratum Level

Stratum	Population (N = 13,432)		Sample Frame (n = 6,225)	
	N	%	n	%
House High Density	1379	10.27	640	10.28
House Medium Density	1912	14.24	886	14.24
House Low Density	1925	14.33	892	14.33
Apartment High Density	4314	32.11	1999	32.11
Apartment Medium Density	2757	20.53	1278	20.53
Apartment Low Density	1145	8.52	530	8.52

Data Collection

Following the IRB approved study protocol, data for the current study were collected using an online survey distributed to participants by email during a three-week timeframe in the spring semester of 2016. The survey was designed and facilitated with Qualtrics, a survey software available to the researcher through Michigan State University. Each student in the study sample frame received an email at their official university email account with an invitation to participate in the current study by completing the survey. Following the initial invitation to participate, email reminders were sent to those students who had not yet participated in the study or had yet to fully complete the survey instrument at the two-week interval. To encourage participation, students who completed the survey could enter a drawing to win \$100 toward their rent. This incentive was paid for by the researcher and was coordinated with rental property managers to ensure the money was used toward rent cost given the emphasis of the current study on off-campus living. To protect participant identity, the Qualtrics software allowed individual participation to be tracked in a manner that disassociated identifiable student information from survey responses. Additionally, students who entered the incentive drawing did so by completing a separate survey that collected their contact information for the drawing and was distinct from the survey and their responses.

Instrument

The instrument used in the current study is comprised of questions drawn from three distinct instruments; the Perceived Cohesiveness Scale (PCS) (Bollen & Hoyle, 1990), the Model for Sense of Community scale (Chavez & Wandersman, 1990), and McLaughlin's dissertation instrument (2011). A combination of instruments was used to construct the current survey to ensure there were questions to adequately address each of the study research questions. The

consent form and survey instrument are available for review in Appendix E and Appendix F, respectively. Next, the instrument is reviewed and the selection of questions explained. For reference, Appendix G has the list of questions associated with each construct.

The first research question examined the sense of belonging off-campus students have toward their local community of residence. The sense of belonging questions were drawn from the Perceived Cohesiveness Scale (PCS), which was used previously in higher education literature (Hausmann, Schofield, & Woods, 2007; Hurtado & Carter, 1997; Maestas, Vaquera, & Muñoz Zehr, 2007) as a measure of sense of belonging. The PCS measures an individual's sense of perceived cohesion, which is defined as "an individual's sense of belonging to a particular group and his or her feelings of morale associated with membership in the group" (Bollen & Hoyle, 1990, p. 482). The PCS is comprised of two sets of questions; one related to sense of belonging and the other one to feelings of morale. The current study used the set of three PCS questions focused on sense of belonging to a group or community of interest. The three PCS belonging items have a Cronbach's alpha of 0.94 (Hurtado & Carter, 1997).

The second research question centered on understanding the influence community factors had on the sense of belonging off-campus students felt toward the local community. Chavez and Wandersman (1990) developed a model of sense of community (MSC) that demonstrated how community factors influenced sense of community and in turn, sense of community acted as a catalyst for community engagement. In the MSC, community factors were examined in three themes: perceptions of the environment, social (neighbor) relations, and perceived control and empowerment (Chavez & Wandersman, 1990). For the current study, questions addressing the environmental and social relations themes were used. The environmental theme items came from the MSC instrument and focused on assessment of block level problems and environment

concerns. The social theme included two sets of questions, both drawn from the McLaughlin dissertation (2011), which like the current study, focused on student residents within a town-gown context. The first set of social questions were based on the Perceived Neighborhood Scale (Martinez, Black & Starr, 2002), and they assessed perceptions of sense of community, social embeddedness, and satisfaction within a neighborhood. The seven neighborhood perception items had a Cronbach's alpha of 0.87 (McLaughlin, 2011). The second set of social questions focused on casual interactions and social relations with neighbors. The McLaughlin (2011) questions were utilized, instead of similarly written MSC questions, because they offered language reflective of a college environment. The neighbor relations items had a Cronbach's alpha of 0.91, (McLaughlin, 2011). Given social relations are likely to influence participation in normative behaviors, both good and bad, the behaviors construct was included in the current study as a factor for consideration as part of the social theme. The development of the behavior construct is described in detail below.

The third research question centered on understanding the relationship between a student's sense of belonging and their participation in a range of behaviors in the local community. The researcher developed an initial list of behaviors for the survey based on her professional experience working in town-gown relations, in conjunction with a review of two annual assessment surveys from the International Town-Gown Association (2013b, 2014), which discussed student behavior challenges and other town-gown topics. The researcher then consulted with two town-gown professionals, one employed by the university and one employed by the city, to review the generated list and make suggested modifications. The final product was a list of 18 behaviors representative of desired positive behaviors (e.g., meet neighbors, participate in neighborhood events) and undesired negative behaviors (e.g., littering, hosting

parties, noise generation) central to town-gown tensions associated with off-campus students. In responding to the behavior questions, participants were asked to indicate the frequency by which they participated or engaged in each behavior.

Data Analysis

Survey data were analyzed using IBM SPSS Statistics, Version 24 software. Planned data analyses included the use of descriptive statistics and regression analyses. Descriptive statistics were computed for all demographic variables (e.g., age, sex, race, year in school). Multiple regression was used for each of the three research questions. Multiple regression analysis was chosen as a dependable and widely-used technique in quantitative analysis in educational research. Regression was an appropriate analysis method for each research question because of the focus on predicting the influence of predictor variables on criterion variables (Remler & Van Ryzin, 2011). The first research question examined how student demographic factors and density influenced off-campus students' sense of belonging to the local community. The second research question concerned predicting the influence of environmental, social, and behavioral factors on off-campus students' sense of belonging. The third research question related to predicting how sense of belonging influenced positive and negative student behavior participation, while also taking into consideration the influence of demographics, density, environmental factors, and social factors.

Limitations of the Study

There are strengths and weaknesses with every study. The crucial component in all research endeavors is to identify these limitations and to understand their implications for the study (Remler & Van Ryzin, 2011). The current study was exploratory in the sense off-campus students had been largely overlooked in empirical research and sense of belonging had not been

utilized to examine town-gown relations and the off-campus context. That said, there are a few limitations to note in the current study.

The design of the study captured the experience of off-campus students in the town-gown context specific to Michigan State University and the City of East Lansing. As a single sample collected in a specific context, the findings of the current study are unique to the sample and not intended to generalize to the larger MSU student population and may differ across different town-gown contexts. The chi-square goodness-of-fit analysis revealed a limitation in the data as the sample and the population differed statistically indicating the sample was not representative of the larger population. Overall, the sample studied had more females and more White students than the population of off-campus students. Similarly, a racial imbalance existed in the studied sample (see Table 3) with more White students participating in the study than students of Color. Full details of the chi-square analysis are provided in Chapter 4 in conjunction with the overview of the study sample. Despite the limitation of generalizability, the current study offers insight about sense of belonging and off-campus students that town-gown administrators can utilize to infer meaning and practical applicability of these findings to their given context.

The population from which the sample was drawn also represented a limitation because the population was an incomplete count of off-campus students due to administrative restrictions. Following IRB approval, the source of the population data was the University Registrar. As a practice, the registrar's office does not include information in data releases for students with restrictions in place on their account, such as voluntarily restriction of their address. Due to this administrative policy alone, the registrar's office withheld 1,832 students from the off-campus student population being considered in the study (J. Murphy, personal communication, February 16, 2016). Additionally, the registrar's office acknowledged, without providing a quantifiable

number, students are not required to submit a local address in the student information system, although the majority do. Together, these limitations reduced the starting population from which the identified sample was drawn.

The self-reported nature of the questions in the study survey was also a limitation. Humans tend to report experiences in surveys in a way that show them in a better light, thus not guaranteeing the accuracy of the results (Remler & Van Ryzin, 2011). The current study also relied on participants to answer questions about a range of behaviors, including punishable or risky behaviors such as drinking or fighting. The survey did not have a connection to municipal, judicial, police, or university conduct records, but there could have been concern from participants of a possible linkage or potential repercussions from participating. To address this concern, the survey consent form indicated participant identity was disassociated from their responses, thus making it impossible to connect participants to responses or to pursue any judicial repercussions.

Conclusion

This chapter included a review of the methodology associated with the current study. A town-gown context provided a rich setting to study off-campus students' feelings of belonging to the local community where they reside during college. The current survey instrument combined questions about perceived cohesion, factors influencing community living, and student behaviors to explore the sense of belonging off-campus students felt toward the local community. Planned data analyses included the use of descriptive statistics and regression analyses. Next, the survey results and findings are presented in Chapter 4.

CHAPTER FOUR

Research Findings

The purpose of this study was to examine the sense of belonging off-campus students felt toward the local community they reside in. Additionally, the study sought to examine the potential influence of environmental, social, and behavioral factors on sense of belonging, and if, in turn, sense of belonging could influence participation in positive and negative behaviors in the town-gown context. The chapter presentation begins with details of preliminary data screening, sample demographic composition, and construct development. Then, multiple regression analysis is discussed and regression assumptions are tested. Finally, regression analyses for each research question are presented and discussed. The chapter concludes with a summary statement.

Preliminary Data Screening

The initial dataset for analysis contained 645 cases, in correspondence to the number of completed surveys received in the Sense of Belonging survey. Before primary data analysis began, the dataset was checked for errors and missing values. Ensuring the accuracy of data prior to primary analysis was essential for credible analysis. First, frequencies and descriptive statistics were calculated for each variable in the dataset. This review identified errors in data entry and coding in the dataset. Data entry errors were resolved by comparing the raw data output from Qualtrics with the SPSS dataset and making necessary adjustments. No coding errors were identified through the examination of frequencies.

Second, univariate statistics were examined for each variable and case to determine the frequency of missing values. Analysis showed none of the 53 individual variables were missing more than 1% of responses, so all variables were retained. The review of participant cases showed 36 cases had missing values with 31 cases missing one response (1.7%), three missing

two responses (3.4%), one missing four responses (7.4%), and one missing 20 responses (38.3%). The two cases with greater than 5% of missing values were deleted from the dataset (Tabachnick & Fidell, 2007), leaving a reduced sample size of 643. The pattern of missing values was assessed with a Missing Values Analysis (MVA) in SPSS, which showed data were missing completely at random (MCAR) with a non-significant Little's MCAR test, $X^2(1246.41, n = 643) = 1223.19, p = .314$. Given the random pattern and low frequency of missing values, the decision was made to use list-wise deletion for missing values during analysis (Tabachnick & Fidell, 2007). List-wise deletion removes a case if a missing value existed in the variables being considered, so only complete cases are analyzed (IBM, n.d.). List-wise removal of missing values reduces the risk of a Type-1 error.

Sample Demographics

The population (N) in the current study was comprised of 13,432 undergraduate students who lived in the target ZIP code of 48823 in the City of East Lansing in spring semester 2016. Using a stratified random sampling strategy, a sample frame of 6,225 potential respondents was selected for the current study. Full details of the sampling strategy were described in Chapter 3. A total of 645 respondents submitted completed surveys for a response rate of 10.4%. In preliminary screening, two cases were dropped due to excessive missing values, resulting in a reduced sample of 643. The sample was further reduced during normality screening of variables with the list-wise deletion of 34 cases and the removal of 20 outlier values. Discussion of the 54 removed cases is provided in a later section detailing testing of normality assumptions. The final reduced sample size was 589, which represented retention of 92% of the original sample.

With the emphasis on density stratification in sample selection, the strata membership of participants was analyzed with a chi-square goodness-of-fit test. The chi-square goodness-of-fit

test compares the proportion of sample participants ($n = 589$) with values from a comparison population, namely, the study population ($N=13,432$) and corresponding stratification (Ott & Longnecker, 2001). The chi-square goodness-of-fit test indicated there was no significant difference in the proportion of sample participants in each of six strata as compared to the observed values of each stratum in the study population, $\chi^2 (5, n = 589) = 4.95, p = .422$.

Participant demographics were self-reported in the survey for characteristics including: race, sex, age in years, year in school, number of roommates, and semesters lived on-campus and off-campus. For the current study, race data were collapsed and individuals were classified as White, students of Color, or International because of the small number of minority and international participants. The students of Color category was inclusive of African Americans, American Indians, Asians, Hispanics, Hawaiian/Native Pacific Islanders, and Multiracial individuals. The international category reflected the university use of an international choice in the race category, distinct from the minority groups referenced above.

Inspection of frequencies in the demographic data ($n = 589$) revealed most of the participants were female (63.8%) and White (84.0%). With a mean of 21 years (36.7%), most participants were in their third year (38.0%) or fourth year (38.7%) of college. The most frequent number of roommates was three (34.5%). Most participants reported having lived on-campus two semesters (46.9%) and living off-campus two semesters (35.8%). Table 3 provides participant demographic characteristics for the original sample ($n = 643$) and the reduced final sample ($n = 589$).

Table 3

Participant Demographic Characteristics for Sample and Reduced Sample

Demographic variable	Sample (n = 643)		Reduced Sample ^a (n = 589)	
	n	%	n	%
Sex				
Female	413	64.2	376	63.8
Male	230	35.8	213	36.2
Race				
White	535	83.2	495	84.0
Students of Color	75	11.7	65	11.0
International	33	5.1	29	4.9
Age in years				
18	3	0.5	3	0.5
19	56	8.7	50	8.5
20	167	26.0	150	25.5
21	229	35.6	216	36.7
22	129	20.1	121	20.5
23	37	5.8	36	6.1
24	8	1.2	7	1.2
25 or greater	14	2.5	6	1.0
Year in School				
First year	3	0.5	3	0.5
Second year	108	16.8	92	15.6
Third year	243	37.9	224	38.0
Fourth year	244	38.0	228	38.7
Fifth year	37	5.8	35	5.9
Other	8	1.2	7	1.2
Semesters Lived On-Campus				
None	99	15.4	88	14.9
One	51	7.9	45	7.6
Two	300	46.7	276	46.9
Three	16	2.5	15	2.5
Four	177	27.5	165	28.0
Semesters Lived Off-Campus				
One	14	2.2	12	2.0
Two	231	35.9	211	35.8
Three	23	3.6	21	3.6
Four	204	31.7	186	31.6
Five	171	26.6	159	27.0

Table 3 (cont'd)

	Sample (n = 643)		Reduced Sample ^a (n = 589)	
	n	%	n	%
Number of roommates				
None/Lives alone	39	6.1	36	6.1
One	156	24.3	146	24.8
Two	90	14.0	87	14.8
Three	217	33.7	203	34.5
Four	57	8.9	56	9.5
Five	28	4.4	25	4.2
Six	9	1.4	9	1.5
Seven	8	1.2	7	1.2
Eight	3	0.5	3	0.5
Ten or greater	35	5.5	17	2.9

Note. ^a the reduced sample size was the result of list-wise deletion of missing values and the removal of outliers during normality screening of variables.

To assess if the sample participants were representative of a comparison off-campus student population, a series of chi square goodness-of-fit tests were performed. Participant demographics for sex, race, and year in school were assessed with a comparison population (N = 16,312) of undergraduate students residing in the East Lansing ZIP code (48823) during the Fall 2015 semester (S. Webster, personal communication, January 18, 2017). For each demographic examined, the chi-square goodness-of-fit tests indicated a significant difference between the sample and comparison population. For sex, the sample had more females (64%) and fewer males (36%) than the population proportion of females (48%) and males (52%), $X^2 (1, n = 589) = 59.19, p < .001$. For ethnicity, the sample had more White students (84%), fewer students of Color (11%), and fewer international students (4.9%) than the population proportion of White students (70%), students of Color (13%), and international students (17%), $X^2 (2, n = 589) = 67.24, p < .001$. For year in school, the sample has fewer first year (0.5%) and second year (17%) students and more third year (41%) and fourth year (42%) students than the population proportion of first year (4%), second year (21%), third year (34%) and fourth year (40%) students,

$\chi^2 (3, n = 546) = 31.20, p < .001$. The chi-square analysis for year in school had fewer cases than the other chi-square analyses because the comparison population was limited to first through fourth year students, whereas the study included fifth year respondents. The variable was recoded to remove fifth year students for chi-square analysis, resulting in $n = 546$. These differences indicated the sample was not representative of the comparison population. As such, study findings should not be generalized to the off-campus student population broadly and interpretations should be done with awareness of the limitation. Nevertheless, the current study provided initial insight into the sense of belonging of off-campus students in the MSU-East Lansing context.

Construct Development

Six constructs were explored through hierarchical regression analysis in the current study. As noted in Chapter 3, four of the six constructs came from theoretical and empirical literature on sense of belonging (Bollen & Hoyle, 1990), sense of community (Chavez & Wandersman, 1990; McLaughlin, 2011), and community ties (McLaughlin, 2011). The fifth (PosBehav) and sixth (NegBehav) were researcher created constructs generated from an existing town-gown association survey (ITGA 2013b; ITGA 2014), then reviewed and further edited by local town-gown professionals. The basis in an existing survey and the subsequent review by professionals with content expertise helped to address concerns with content validity of the new measure (Remler & Van Ryzin, 2011). Each construct scale was a combination of scores from Likert-style questions on the study's survey instrument. The construct names and abbreviations are reported in Table 4 and items used to develop each construct are provided in Appendix G.

Table 4
Cronbach's Alphas for Constructs Used in Multiple Regression Analyses

Construct	Construct abbreviation	Cronbach's alpha
Sense of Belonging Total	SoBTotal	.91
Environmental Factors	Factors	.79
Neighborhood Perceptions	Perceptions	.87
Neighborhood Relations	Relations	.91
Positive Town-Gown Behaviors	PosBehav	.61
Negative Town-Gown Behaviors	NegBehav	.74

Construct Reliability and Validity

The reliability of a construct concerns the consistency of the measure over time and over a variety of conditions. For constructs composed of multiple items, reliability is a measure of the internal consistency between the various items. A widely-used measure of internal consistency reliability is Cronbach's coefficient alpha (α) (DeVellis, 1991). The range for Cronbach's α values is 0 to 1, with values of .70 considered sufficient and higher values seen as respectable, while more modest values of .50 to .60 as acceptable for the beginning stages of research (DeVellis, 1991). For each construct used in the current study, a Cronbach's α was calculated and reported in Table 4 above. The calculated Cronbach's α for the constructs ranged from .61 to .91, all within the range of sufficient and respectable values for internal consistency reliability.

The development of each construct is described next. The survey questions utilized in the development of the construct are referenced along with their corresponding variable name in parenthesis (e.g., Sex). Table 5 has descriptive statistics (e.g., mean, SD) for each construct.

Background Characteristics

Background characteristics consisted of seven variables including: age in years (Age), sex (Sex), the dummy coded race variable (Race1, White; Race2, students of Color; Race3, International), year in school (YrSchool), number of semesters lived on-campus (LiveOn) and

off-campus (LiveOff), and number of roommates (RoomLog). Six density variables (AptHigh, AptMed, AptLow, ResHigh, ResMed, ResLow) were used as background characteristics because density was an important study component and a central part of the stratified sampling strategy.

Sense of Belonging Construct

Sense of belonging relates to the human desire to feel connection and belongingness with others in the community (Hurtado & Carter, 1997; Strayhorn, 2012). In the current study, respondents answered three questions about their sense of belonging to the local, off-campus community. The three belonging questions were: “I feel that I am a member of the East Lansing community” (ELmember), “I see myself as part of the East Lansing community” (PartofEL), and “I feel a sense of belonging to the City of East Lansing” (SoBtoEL). The Likert-scale scores (1= *Strongly Disagree*, 2= *Disagree*, 3= *Neutral*, 4= *Agree*, 5= *Strongly Agree*) of the three questions were summed to create the Sense of Belonging construct (SoBT). These questions and the derived SoBT construct were modeled after work of Bollen and Hoyle (1990) and others (Hausmann et al., 2007; Hurtado & Carter, 1997). With a Cronbach’s α of .91, the SoBT construct had strong internal reliability as a measure of sense of belonging and was consistent with the previous works identified.

Environmental Factors Construct

The environmental factors construct stemmed from the work of Chavez and Wandersman (1990) that examined how perceptions of the environment influenced sense of community. The questions related to potential problems present in an environment at the neighborhood block level and asked respondents to indicate the significance of each problem on a Likert-scale (1 = *Not a problem*, 2 = *Minor problem*, 3 = *Moderate problem*, 4 = *Major problem*). The 11 environment questions used to derive the Environmental Factors construct (Factors) were:

“Conditions of houses” (Houses), “Traffic” (Traffic), “Street parking” (Parking), “Crime” (Crime), “Litter” (Litter), “Noisy Neighbors” (Noise), “Unkempt lawns” (Lawns), “Garbage collection” (Garbage), “Recycling collection” (Recycling), “Police service” (Police), and “Parking services-enforcement” (PACE). Low scores on the Factors scale represented a low perception of community problems and high scores represented a high perception of community problems. Cronbach’s α for the Factors construct was .79, which indicated a respectable internal reliability as a measure of environmental factors in assessing community belonging.

Neighborhood Perceptions Construct

Like the environmental factors construct, the neighborhood perceptions construct examined how perceptions influence feelings of community belonging, with an emphasis on perceptions of neighborhood relations. Drawn from the dissertation work of McLaughlin (2011), six questions made up the neighborhood perceptions construct (Perceptions) and utilized a Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, 5 = *Strongly Agree*). The construct items were: “There are people I can rely on among my neighbors” (RelyOn), “People trust each other in my neighborhood” (TrustOthers), “I feel I belong in my neighborhood” (BelongTo), “I care about what my neighbors think of my actions” (Care), “I feel close to some of my neighbors” (CloseTo), “People in my neighborhood are usually warm and friendly” (Friendly), and “We look out for one another in this neighborhood” (LookOut). The Perceptions construct had a Cronbach’s α of .87, which indicated good reliability in measuring neighborhood perceptions and was consistent with prior work with the same construct (McLaughlin, 2011).

Neighborhood Relations Construct

The neighborhood relations construct focused on neighborhood actions and social interactions among neighbors. The neighborhood relations construct (Relations) utilized two sets

of questions to capture this construct (McLaughlin, 2011). The first set used a Likert scale (1 = *Very Unlikely*, 2 = *Unlikely*, 3 = *Not Sure*, 4 = *Likely*, 5 = *Very Likely*) and each question began “How likely is it that you would...” and included: “Borrow something like a tool, if they had one” (BorrowTool), “Borrow something like money” (BorrowMoney), “Ask you to borrow something, like a tool, if you had one (LoanTool), “Ask you to borrow something, like money (LoanMoney), “Get help from a neighbor” (HelpFrom), and “Help a neighbor” (HelpTo).

The second set of questions used a Likert scale (1 = *Very Seldom/Never*, 2 = *Seldom* (once every 3 months), 3 = *Sometimes* (once per month), 4 = *Often* (once per week), 5 = *Very Often* (daily)) and each question began “How often do you...” including: “Greet your neighbors when you see them” (Greet), “Casually visit with neighbors, either going over to their place or their coming over to yours” (CasualVisit), “Participate in neighborhood activities (e.g., cookouts, parties)” (NeighActiv), “Talk to neighbors who are students” (TalkToStu), “Talk to neighbors who are non-students” (TalkToNonStu), and lastly, “People in this neighborhood do favors for each other” (FavorsFor). Taken together, the 12-item Relations construct had a Cronbach’s α of .91, which indicated a good reliability as a measure for neighborhood relations and was consistent with prior work with the same construct (McLaughlin, 2011).

Positive and Negative Behaviors Constructs

The positive behaviors construct (PosBehav) and negative behaviors construct (NegBehav) both gauged the frequency of student participation in behaviors common in the town-gown context. The construct items were derived from an International Town-Gown Association (2013b, 2014) assessment and were vetted by university and municipality professionals with town-gown expertise. The 12 items represented a set of five positive or desired behaviors and a set of seven negative or more problematic behaviors within the town-

gown context. To better understand the role of behaviors in the study, a positive behaviors construct and a negative behaviors construct were created. Both constructs were derived from items measured on a Likert scale (1 = *Very Seldom/Never*, 2 = *Seldom* (once every 3 months), 3 = *Sometimes* (once per month), 4 = *Often* (once per week), 5 = *Very Often* (daily)). Each question began with the prompt “how often do you...” and asked respondents to indicate frequency of participation in a behavior.

Positive behavior construct. The positive behaviors construct (PosBehav) included five behavior items: “Do yard maintenance, like mowing, raking, or shoveling” (YardMaint), “Use trash and recycling services at your residence” (TrashRecy), “Pick up litter or trash in your yard” (Litter), “Participate in community-wide activities (e.g., Farmer’s Market, live music)” (CommActiv), and “Use city resources or services (e.g., public library, community center, parks, recreation facilities)” (CityResource). The positive behaviors construct had a Cronbach’s α of .61, which is modest, but acceptable in early stages of research (DeVillis, 1991) as was the case with this new construct for evaluating participation in positive behaviors in a town-gown context.

Negative behavior construct. The negative behaviors construct (NegBehav) included seven items: “Attend a party in your neighborhood” (PartyAttend), “Host a party at your residence” (PartyHost), “Consume alcohol” (Alcohol), “Receive an alcohol violation from police” (AlcoholViol), “Have loud noise coming from your residence (e.g. music)” (NoiseFrom), “Receive a noise violation ticket at your residence” (NoiseViol), and “Get into a fight with people in your neighborhood” (Fight). The negative behaviors construct had a Cronbach’s α of .74, which indicated a suitable reliability as a measure of participation in negative behaviors in the town-gown context.

Table 5

Descriptive Statistics for Constructs (n = 589)

Construct (Variable name)	Mean	SD	Minimum	Maximum
Sense of Belonging Total (SoBT)	11.28	2.61	3	15
Environmental Factors (Factors)	21.45	5.88	11	41
Neighborhood Perceptions (Perceptions)	22.79	5.33	7	35
Neighborhood Relations (Relations)	27.97	9.90	12	60
Positive Behaviors (PosBehav)	12.79	3.51	5	22
Negative Behaviors (NegBehav)	13.61	4.03	7	28

Regression Analysis

Multiple regression is a set of statistical techniques used to explore the relationship between one criterion variable and one or more predictor variables. In hierarchical multiple regression, predictor variables are entered into a model in an order specified by the researcher and rooted in theoretical grounds. Predictors are entered in steps, with each variable (or set of variables) being evaluated for its contribution to the model at its own time of entry, after accounting for the contributions of previous variables (Tabachnick & Fidell, 2007). In the current study, the order of predictor variable entry is discussed as a component of the analysis for each research question.

For each research question analyzed, the results of the corresponding hierarchical regression analysis are presented in table format in the appendices. Each table reports the standardized regression coefficients (β), R , R squared (R^2), adjusted R^2 (Adj. R^2), change in R^2 (ΔR^2) and change in F (ΔF) associated with each model (Tabachnick & Fidell, 2007).

Standardized regression coefficients (β) represent the contribution of each variable to the prediction of the dependent variable, given the other variables at the same stage in the model.

The standardized coefficients were chosen, over unstandardized coefficients, so variables could be compared to one another on the same scale. R^2 is the proportion of variance in the dependent

variable explained by the regression model. Adjusted R^2 corrects for interactions between variables and provides the adjusted R^2 value that would result from a new sample being run on the same set of data. In hierarchical regression, an R^2 value is calculated for each step in the model, but as steps are added, the R^2 value includes the proportion of variance provided by the current step and earlier steps. The incremental change of R^2 at each step is represented by the change in R^2 (ΔR^2) value. The change in F (ΔF) determines the significance of the ΔR^2 value at each step. Statistical significance was set at .05 for all analyses, with a 95% confidence interval.

Evaluation of Regression Assumptions

Prior to performing analysis to test the research questions, 34 cases were removed via list-wise deletion, resulting in a starting sample of 609 for normality analysis. Next, assumptions of normality were evaluated for interval and ratio variables with examination of means, standard deviations, minimum and maximum values, and skewness (Table 6). Normal distributions were seen across all variables except for Age and Roommates, which had severe positive skewness values of 9.33 and 5.35, respectively. Univariate outliers were found in Age and Roommates by the identification of cases with z -scores more than three standard deviations from the mean, ($p < .001$, two-tailed test) (Tabachnick & Fidell, 2007). For Age, six cases with outlier values were removed, resulting in an improved skew value of .52. For Roommates, 14 outlier cases were removed and a logarithm transformation was performed, resulting in an improved skew value of .19 for RoomLog. In total, 20 outliers were removed leaving a final reduced sample of 589. The reduced sample size was adequate for analysis with 16 predictor variables (Tabachnick & Fidell, 2007). Descriptive statistics were recalculated in Table 7 for all variables using $n = 589$.

Table 6

Descriptive Statistics for Interval and Ratio Variables After List-Wise Deletion (n = 609)

Variable Name	Mean	Standard Deviation	Skew	Minimum	Maximum
Age	21.09	2.13	9.33	18	57
Year in School	3.36	.88	.15	1	6
Live On Semesters	2.18	1.33	-.04	0	4
Live Off Semesters	3.45	1.28	-.17	1	5
Roommates	3.75	6.80	5.35	0	54
Sense of Belonging	11.29	2.58	-.86	3	15
Environmental Factors	21.51	5.99	.52	11	44
Neighbor Perceptions	22.89	5.35	-.11	7	35
Neighbor Relations	28.10	9.86	.42	12	60
Positive Behaviors	8.96	3.19	.41	4	18
Negative Behaviors	13.60	4.02	.77	7	28

Table 7

Descriptive Statistics for Interval and Ratio Variables in Final Reduced Sample (n = 589)

Variable	Mean	Standard Deviation	Skew	Minimum	Maximum
Age	20.96	1.18	.52	18	25
Year in School	3.38	.88	.10	1	6
Live On (semesters)	2.21	1.33	-.06	0	4
Live Off (semesters)	3.46	1.28	-.18	1	5
Roommates (Logarithm Transform)	.52	.23	.19	0	1.40
Sense of Belonging	11.28	2.61	-.85	3	15
Environmental Factors	21.45	5.88	.45	11	41
Neighbor Perceptions	22.79	5.33	-.09	7	35
Neighbor Relations	27.97	9.90	.44	12	60
Positive Behaviors	12.79	3.51	.28	5	22
Negative Behaviors	13.61	4.03	.76	7	28

The assumption of singularity was met because the predictor variables, both individually and as constructs, were not combinations of other predictor variables. The assumption of multicollinearity was met because predictor variables were not highly correlated and collinearity statistics (i.e., Tolerance and VIF) were within accepted limits (Ott & Longnecker, 2001). See Appendix H for the correlation matrix of predictor and criterion variables and see Appendix I for collinearity statistics associated with each final regression model. Univariate outliers were

removed as described above and no multivariate outliers were found based on Mahalanobis distance scores. Residual and scatter plots indicated assumptions of normality, linearity, and heteroscedasticity were satisfied (Tabachnick & Fidell, 2007).

Sample Variance Tests for Sense of Belonging

Before beginning analysis for the research questions, sample variance tests were done to ascertain if group differences existed in sense of belonging (SoBT) as a function of demographic characteristics. Predictor variables with two distinct groups were analyzed with an independent-samples t-test, while ordinal variables with more than two groups were evaluated using one-way analysis of variance (ANOVA) tests. Sex (male, female) was evaluated with a T-test. The remainder of demographic variables evaluated with ANOVAs included: race, year in school, semesters lived on campus, semesters lived off campus, and the density variable. Results of the sample variance tests are presented in table format in Appendix J.

The independent-samples t-test was conducted to compare the sense of belonging scores for males and females. There was a significant difference in mean scores for males ($M = 11.00$, $SD = 2.65$) and females ($M = 11.44$, $SD = 2.58$; $t(587) = 2.01$, $p = .045$, two-tailed). The magnitude of the differences in means (mean difference = .45, 95% *CI*: .01 to .89) was very small (eta squared = .006). This finding indicated males had lower sense of belonging to the local community than females.

For the ANOVAs conducted, there was no significant difference noted in scores for race, year in school, semester lived off-campus, and density. The ANOVA for living on campus (LiveOn) revealed a significant difference at the $p < .05$ level in the sense of belonging (SoBT) scores: $F(4, 584) = 3.40$, $p = .01$. The magnitude of difference on mean scores between groups was small (eta squared = .02). Post-hoc comparisons using Tukey HSD indicated the mean score

for No Semesters ($M = 10.51$, $SD 2.69$) differed from the means for One Semester ($M = 12.07$, $SD 2.21$) and for Two Semesters ($M = 11.39$, $SD 2.53$). This finding indicated students who had never lived on campus had a lower sense of belonging than students who had lived on campus one semester or two semesters.

The following sections report the results of the three research questions in the current study. Each question is restated and associated regression analyses are presented in a table and interpretations of findings are provided. Final regression models for each question, including standardized and unstandardized coefficients and collinearity are provided in Appendix I.

Research Question One

RQ 1: To what extent do demographic characteristics and residential density contribute to the prediction of off-campus students' sense of belonging to the local community?

The first research question sought to examine what effect background characteristics and residential density had in predicting the sense of belonging of off campus students to the local community. A two-step hierarchical regression was conducted with Sense of Belonging (SoBT) as the dependent variable. Demographic characteristics including age (Age), sex (Sex), race (Race2, students of Color; Race3, International), year in school (YrSchool), number of semesters lived on campus (LiveOn), number of semesters lived off campus (LiveOff), and number of roommates (logarithm transformation) (RoomLog) were entered as predictor variables in step 1, with dummy coded Race1 (White students) left out as a constant. Step 2 included the addition of residential density categories consisting of five dummy variables (AptMed, AptLow, ResHigh, ResMed, ResLow) with the sixth dummy variable (AptHigh) left out as the constant.

At the end of step 1 and step 2, neither model showed a statistically significant R^2 relationship between background characteristics or residential density in predicting sense of

belonging. None of the predictor variables were statistically significant predictors of sense of belonging. The variance at the end of model 2 was .036 indicating only 3.6% of the variance in sense of belonging was attributed to background and density variables. Appendix K displays the regression statistics at each step. For the subsequent research questions, these demographic and density variables were entered in step 1 and step 2 respectively, as a control in evaluating the contribution of additional predictors beyond what is already afforded by these variables.

Research Question Two

RQ 2: To what extent do environmental, social, and behavioral factors contribute to the prediction of off-campus students' sense of belonging to the local community?

The second research question sought to determine if environmental, social, and behavioral factors contributed to the prediction of sense of belonging. In the analysis, sense of belonging (SoBT) was the dependent variable and the environmental factors construct (Factors) two social factor constructs, neighborhood perceptions (Perceptions) and neighborhood relations (Relations), and two behavioral constructs, positive behaviors (PosBehav) and negative behaviors (NegBehav) were the predictor variables. The demographic and density variables used as predictors in the first research question were entered in step 1 and step 2 respectively as control variables in the model. The use of control variables allowed for understanding of how the prediction changed with the addition of new variables, beyond the prediction associated with the control variables. After the control variables were entered, the additional factors were entered in the following order: step 3 as the environmental factors construct (Factors); step 4 as the neighborhood perceptions construct (Perceptions), step 5 as the neighborhood relations construct (Relations), and step 6 as both behavioral constructs (PosBehav, NegBehav). The order of entry of the five predictor variables in steps 3 - 6 was chosen to reflect the way the

concepts are discussed in relation to one another in the sense of community work of Chavez and Wandersman (1990). Additionally, the order of entry aligned with a similar approach taken by McLaughlin (2011) during his dissertation research focused on off-campus students in the town-gown context. Appendix L shows the results of the hierarchical regression analysis depicting the contribution of environmental, social, and behavioral variables to predicting sense of belonging.

After demographic and density variables were entered as control variables in steps 1 and 2 respectively, 3.6% of the variance in sense of belonging was explained, although neither model was statistically significant. After entry of Factors at step 3, the total variance explained by the model was unchanged from the prior steps, as indicated by a R^2 of .36 and a change in R^2 of .000. Model 3 was not statistically significant further signifying the Factors construct did not reliability predict sense of belonging in the analysis.

After entry of Perceptions at Step 4, the model improved to predict 19.5% of the variance in sense of belonging and was statistically significant, $R^2 = .195$, $F(15, 573) = 9.265$, $p < .001$. The Perceptions construct uniquely predicted 15.9% of the variance in sense of belonging, after controlling for demographics, density, and Factors, R^2 change = .159, F change (1, 573) = 113.198, $p < .001$. In Step 4, sex was the only significant individual predictor of sense of belonging among the demographic characteristics. Sex (reference = female) was a negative predictor of sense of belonging ($\beta = -.090$, $p < .05$) indicating males had less of a sense of belonging to the local community than females. The Perceptions construct was a significant positive predictor of sense of belonging ($\beta = .413$, $p < .01$) indicating those with more positive perceptions of the local community had a higher sense of belonging.

After entering the Relations construct into the model at Step 5, the variance explained by the model had negligibly changed to 19.6% from the earlier Step 4, yet the model remained

statistically significant overall, $R^2 = .196$, $F(16, 572) = 8.691$, $p < .001$. The Relations construct did not uniquely contribute to the variance in the Step 5 model, after accounting for the predictive contributions of demographic, density, Factor, and Perceptions variables, R^2 change = .000, F change (1, 572) = .260, $p = .610$. The non-significant R^2 change value at Step 5 signifies the Relations construct did not reliability predict sense of belonging in the analysis. In Step 5, significant predictors from prior steps were again significant including the Perceptions construct ($\beta = .432$, $p < .01$) as a strong positive of belonging and Sex (male = 1) ($\beta = -.089$, $p < .05$) as a modest negative predictor of belonging.

After the positive (PosBehav) and negative (NegBehav) behavior constructs were entered in at Step 6, the variance explained by the model increased slightly to 20.3% and was statistically significant overall, $R^2 = .203$, $F(18, 570) = 8.054$, $p < .001$. The R^2 change value was not statistically significant, indicating the behavior constructs did not uniquely contribute to the prediction of sense of belonging at this interval, R^2 change = .007, F change (2, 570) = 2.58, $p = .077$. Sex (male) ($\beta = -.086$, $p < .05$) and Perceptions construct ($\beta = .425$, $p < .01$) were again significant predictor variables in the model, as in the previous two steps. Introduced in Step 6, PosBehav was a statistically significantly predictor variable ($\beta = .102$, $p < .05$), while NegBehav was not. The directionality of the standardized coefficients suggested being male was associated with lower sense of belonging, while having positive perceptions of community and increased participation in positive behaviors was associated with higher sense of belonging. The findings associated with the PosBehav and NegBehav constructs should be interpreted with caution because the unique contribution of the two behavior constructs at Step 6 were non-significant in the overall, final model. In the final model, the most important predictor of sense of belonging was the Perceptions construct accounting for 15.9% of the model variance as seen in Step 4.

Overall, the final model of environmental, social, and behavioral factors accounted for 20.3% of the variance in sense of belonging.

To aid in interpretation of the findings of the hierarchical regression analysis of sense of belonging in research question two, statistically significant predictors are summarized in Table 8.

Table 8

Summary of Statistically Significant Predictors of Sense of Belonging

Construct	Contribution to Sense of Belonging	Step # Factor was Significant
Demographic variables	Sex (male)	4, 5, 6
Social factors (i.e., Perceptions, Relations)	Perceptions	4, 5, 6
Behaviors	PosBehav*	6

Note. * PosBehav finding should be interpreted with caution because R^2 change was non-significant at the entry of positive and negative behavior constructs in Step 6.

Research Question Three

RQ 3: What is the relationship between sense of belonging in off-campus students and their involvement in positive behaviors (e.g., neighborhood involvement, responsible neighbor) and negative behaviors (e.g., alcohol violations, litter, fights) within the local community?

The third research question sought to understand the relationship between off-campus students' sense of belonging to the local community and their involvement in positive and negative behaviors in the town-gown context. In contrast to the two prior research questions, sense of belonging (SoBT) was a predictor variable in the regression equation, while positive behaviors (PosBehav) and negative behaviors (NegBehav) were both criterion variables. With two criterion variables and an interest in assessing the influence of sense of belonging on both positive and negative behaviors, two separate hierarchical regression analyses were conducted. In each model, demographic variables (Age, Sex, Race2, Race3, YrSchool, LiveOn, LiveOff, RoomLog) and residential density variables (AptMed, AptLow, ResHigh, ResMed, ResLow)

were again entered in Step 1 and 2 respectively as control variables. The Factors, Perceptions, and Relations constructs were entered in Steps 3 – 5, respectively. Sense of belonging (SoBT) was entered in Step 6.

Hierarchical Regression Analysis of Positive Behaviors

Results of the hierarchical regression analysis depicting the contribution of demographic, density, factors, perceptions, relations and sense of belonging constructs in predicting participation in positive behaviors in the local community are depicted in Appendix M. After Step 1, demographic characteristics contributed 8.5% of the variance in positive behaviors and was statistically significant, $R^2 = .085$, $F(8, 580) = 6.769$, $p < .001$. Significant, positive predictors were RoomLog ($\beta = .228$, $p < .001$) and LiveOff ($\beta = .147$, $p < .01$). The positive directionality indicated having higher numbers of roommates and living off campus more semesters contributed to greater participation in positive behaviors.

Residential density predictors were entered in Step 2, which resulted in a statistically significant increase in variance to 17.7% overall, $R^2 = .177$, $F(13, 575) = 9.531$, $p < .001$. The unique, statistically significant contribution of density predictors at this interval was 9.2%, $R^2 \text{ change} = .092$, $F \text{ change}(5, 575) = 12.843$, $p < .001$, which represented the largest interval contribution in the model. In order of significance, positive predictors included ResHigh ($\beta = .226$, $p < .001$), ResMed ($\beta = .219$, $p < .001$), ResLow ($\beta = .141$, $p < .001$), LiveOff ($\beta = .116$, $p < .05$), and RoomLog ($\beta = .093$, $p < .05$). The Res variables represented residential areas of houses characterized as high, medium, and low levels of density. With all three levels of residential density being significant, the finding suggested living in a house, regardless of density, was associated with increased participation in positive behaviors. As density levels increased so did the contribution of the variable to positive behaviors participation.

The third step introduced the environmental factors construct (Factors) into the model, which resulted in a statistically significant increase in variance to 18.6% overall, $R^2 = .186$, $F(14, 574) = 9.394$, $p < .001$. The unique contribution of the Factors construct at this interval minimal, but statistically significant, at less than 1%, R^2 change = .009, F change (1, 574) = 6.447, $p < .01$. In order of significance, positive predictors were ResMed ($\beta = .223$, $p < .001$), ResHigh ($\beta = .214$, $p < .001$), ResLow ($\beta = .146$, $p < .001$), Factors ($\beta = .098$, $p < .01$), AptMed ($\beta = .047$, $p < .05$), and LiveOff ($\beta = .037$, $p < .05$). All three Res density variables and LiveOff were again indicative of increased participation in positive behaviors. Present in this step only, AptMed was a significant indicator suggesting medium density apartment dwellers were more involved in positive behaviors than other apartment dwellers. The positive directionality of Factors suggested as perceptions of environmental problems increased, so does participation in positive behaviors.

After entering the Perceptions construct into the model at Step 4, the variance explained by the model increased to 24.9%, which was statistically significant, $R^2 = .249$, $F(15, 573) = 12.645$, $p < .001$. The statistically significant Step 4 interval contributed 6.2% to the model, R^2 change = .062, F change (1, 573) = 47.497, $p < .001$. In order of significance, familiar positive predictors were ResMed ($\beta = .208$, $p < .001$), ResHigh ($\beta = .189$, $p < .001$), ResLow ($\beta = .152$, $p < .001$), Factors ($\beta = .106$, $p < .01$), and RoomLog ($\beta = .091$, $p < .05$). The newest addition Perceptions ($\beta = .259$, $p < .001$) was the largest significant predictor at Step 4. The positive directionality of Perceptions suggested as positive perceptions of the local community increased, so did participation in positive behaviors.

The fifth step introduced the Relations construct to the model, which improved the model predictability to 28.7% of the variance in positive behavior participation, $R^2 = .287$, $F(16, 572) =$

14.406, $p < .001$. The unique, statistically significance of the fifth interval contributed 3.9% to the model variance, R^2 change = .039, F change (1, 572) = 30.923, $p < .001$. In order of significance, familiar positive predictors were ResMed ($\beta = .198, p < .001$), ResHigh ($\beta = .165, p < .001$), ResLow ($\beta = .150, p < .001$), and Factors ($\beta = .093, p < .01$). Relations ($\beta = .284, p < .001$) was the largest significant predictor at this interval with the positive directionality suggesting as neighborhood relations (e.g., social interactions, casual conversation) increased, participation in positive behaviors also increased.

The sixth and final step was the addition of Sense of Belonging (SoBT) to the regression model. The overall model was statistically significant and explained 29.4% of the variance in positive behavior participation, $R^2 = .294, F(17, 571) = 13.958, p < .001$. The unique contribution of SoBT at the sixth interval was statistically significant yet minimal, indicating SoBT contributed less than 1% to the variance in positive behavior participation, R^2 change = .006, F change (1, 571) = 5.123, $p < .05$. Significant predictors familiar from prior steps included Relations ($\beta = .287, p < .001$), ResMed ($\beta = .197, p < .001$), ResHigh ($\beta = .164, p < .001$), ResLow ($\beta = .148, p < .001$), and Factors ($\beta = .091, p < .01$). Additionally, SoBT ($\beta = .089, p < .05$) was a modest positive predictor, suggesting higher feelings of belonging were associated with increased participation in positive behaviors. In the final model, Relations ($\beta = .287, p < .001$) was the strongest predictor, while addition of the density variables at Step 2 showed the largest incremental increase of the model at 9.2%. Overall, the final model accounted for 29.4% of the variance in positive behavior participation.

Hierarchical Regression Analysis of Negative Behaviors

The results of the hierarchical regression analysis depicting the contribution of demographic, density, Factors, Perceptions, Relations and Sense of Belonging constructs to

predicting participation in negative behaviors (NegBehav) are presented in Appendix N. At the end of Step 1, demographic characteristics had contributed 14.6% of the variance in negative behavior participation and was statistically significant, $R^2 = .146$, $F(8, 580) = 12.423$, $p < .001$. Three predictor variables were statistically significant predictors with positive directionality. RoomLog ($\beta = .271$, $p < .001$) was the largest predictor suggesting a higher number of roommates was associated with greater participation in negative behaviors. Sex (male = 1) ($\beta = .191$, $p < .001$) suggested males participate in negative behaviors more than females. LiveOff ($\beta = .137$, $p < .01$) showed the more semesters a student lived off campus, the more their participation in negative behaviors increased.

After residential density variables were entered in Step 2, the overall model was statistically significant and accounted for 19.5% of the variance in negative behavior participation, $R^2 = .195$, $F(13, 575) = 10.742$, $p < .001$. The unique contribution of the density variables entered at Step 2 was 4.9% of the variance in the total model and was statistically significant, $R^2 \text{ change} = .049$, $F \text{ change}(5, 575) = 7.022$, $p < .001$. Four predictor variables were statistically significant with positive directionality. RoomLog ($\beta = .206$, $p < .001$) was again the largest predictor as described in the previous step. ResHigh ($\beta = .198$, $p < .001$) was the next largest contributor suggesting living in a high-density area of residential homes was associated with greater participation in negative behaviors, while levels of lower density homes were not predictors of negative behavior participation. Sex (male = 1) ($\beta = .194$, $p < .001$) and LiveOff ($\beta = .124$, $p < .05$) were again positive predictor variables.

After entering the Factors construct into the model at Step 3, the variance explained by the model increased to 21.7%, which was statistically significant, $R^2 = .217$, $F(14, 574) = 11.382$, $p < .001$. The unique statistically significant contribution of the Factors interval was

2.2% of the variance, R^2 change = .022, F change (1, 574) = 16.042, $p < .001$. In order of significance, positive predictors familiar from prior steps were Sex (male = 1) ($\beta = .201$, $p < .001$), RoomLog ($\beta = .192$, $p < .001$), ResHigh ($\beta = .179$, $p < .001$), LiveOff ($\beta = .107$, $p < .05$), and LiveOn ($\beta = .080$, $p < .05$). The Factors construct ($\beta = .152$, $p < .001$) was a statistically significant positive predictor indicating as perceptions of environmental problems increased, participation in negative behaviors increased.

After the Perceptions construct was entered at Step 4, the variance explained by the model increased to 28.4% and was statistically significant, $R^2 = .284$, F (15, 573) = 15.188, $p < .001$. The unique contribution of the interval was statistically significant adding 6.7% to the model variance, R^2 change = .067, F change (1, 573) = 53.810, $p < .001$. The Perceptions construct ($\beta = .269$, $p < .001$) was a significant positive predictor indicating as positive perceptions of the community increased, participation in negative behaviors also increased. Significant positive predictors from prior steps included RoomLog ($\beta = .199$, $p < .001$), Sex (male = 1) ($\beta = .186$, $p < .001$), Factors ($\beta = .160$, $p < .001$), and ResHigh ($\beta = .153$, $p < .001$).

At Step 5, the Relations construct was added to the model, which increased the variance explained to 37% and was statistically significant, $R^2 = .370$, F (16, 572) = 20.996, $p < .001$. The unique statistically significant contribution of the Relations interval was 8.6%, R^2 change = .086, F change (1, 572) = 77.646, $p < .001$. In order of significance, positive predictors familiar from prior steps were Sex (male = 1) ($\beta = .170$, $p < .001$), RoomLog ($\beta = .169$, $p < .001$), Factors ($\beta = .141$, $p < .001$), and ResHigh ($\beta = .118$, $p < .001$). Relations ($\beta = .424$, $p < .001$) was the largest significant positive predictor at Step 5, suggesting as social interactions with neighbors increased so did participation in negative behaviors.

With the introduction of Sense of Belonging (SoBT) in the sixth and final step, the

variance explained by the model remained unchanged at 37%, but was statistically significant, $R^2 = .370$, $F(17, 571) = 19.728$, $p < .001$. The unique contribution of SoBT at Step 6 was not a statistically significant contribution to the model variance. In the final model, significant positive predictors familiar from prior steps included Relations ($\beta = .424$, $p < .001$), Sex (male = 1) ($\beta = .171$, $p < .001$), RoomLog ($\beta = .169$, $p < .001$), Factors ($\beta = .141$, $p < .001$), and ResHigh ($\beta = .118$, $p < .001$). Additionally, SoBT ($\beta = .006$, $p = .878$) was a non-significant predictor, which suggested sense of belonging did not reliably influence participation in negative activities. In the final model, Relations ($\beta = .424$, $p < .001$) was the strongest predictor of participation in negative behaviors. The final model of demographics, density, Factors, Perceptions, Relations and Sense of Belonging accounted for 37% of the variance in negative behavior participation.

Summary of Significant Predictors of Student Behaviors

To compliment the findings presented for the hierarchical regression analyses of positive and negative behaviors in research question three, Table 9 summarizes statistically significant predictors for both behavior types.

Table 9

Summary of Statistically Significant Predictors of Positive and Negative Behaviors

Factor	Positive Behaviors	Negative Behaviors
Demographic variables	- Semesters lived off campus - Number of roommates	- Semesters lived off campus - Number of roommates - Sex (male)
Density categories	Predictive power of houses at all density levels; no apartment levels	High density houses
Environmental factor	Perceptions of environmental problems	Perceptions of environmental problems
Social factors (i.e., Perceptions, Relations)	Relations, not Perceptions	Relations, not Perceptions
Sense of Belonging	Small, positive contribution of Sense of Belonging	No contribution of Sense of Belonging

Summary

The current chapter began with details of data screening efforts, sample demographic composition, and construct development. Hierarchical regression analysis was reviewed and regression assumptions were tested and met. Regression analysis conducted for the research questions revealed demographic variables alone did not significantly contribute to the prediction of sense of belonging in off-campus students. The addition of environmental, social, and behavior factors in a sequential model showed the neighborhood perceptions factor and positive behavioral participation factor contributed significantly to the prediction of sense of belonging more than other factors considered. Regression findings also revealed sense of belonging was a statistically significant predictor of positive behavior participation only, albeit a modest one, suggesting other factors must also influence both positive and negative behavior participation in the town-gown context. Chapter 5 shares the discussion of these data and how they relate to literature on sense of belonging, commuter students, and the town-gown context. Implications for research and practice are presented, as well as future directions for research.

CHAPTER FIVE

Discussion

The current study examined the sense of belonging off-campus students felt toward their local community of residence during college. Central to the study was exploration of the environmental, social, and behavioral factors that contribute to sense of belonging, and in turn how these factors and feelings of belonging served to predict participation in positive and negative behavior within the town-gown context. This chapter summarizes the results and explains the findings from hierarchical regression analyses in association with literature on commuter students, sense of belonging, and town-gown relations. The research questions built sequentially on one another, so the discussion reflects this sequence in presentation. The contributions and implications of the current study to practice and policy are discussed. The chapter concludes with directions for future research.

Motivation for the Current Study

The impetus for the current study emerged from the need to address behavior issues in the town-gown community and the practical need to know more about off-campus students as central actors in these behaviors. The general lack of knowledge about off-campus students was due to two primary factors. First, the broad, historical definition of commuters has included all students who do not live in university sponsored housing, regardless of within-group differences that likely exist (Dugan et al., 2008). As such, off-campus students are considered commuters and limited attention is paid to them as a unique subpopulation in higher education. Second, contemporary town-gown literature and news media focused on student behaviors as a prevalent challenge in the town-gown community (Baker-Minkel et al., 2004; Twohey, 2007), yet failed to formally examine off-campus students as central actors in these behaviors. Existing town-gown

research has focused largely on university administrators and municipal leaders (Bruning et al., 2006), and non-student residents (Kittle, 2005) as stakeholders in the town-gown community, with little consideration of off-campus students in the same community context (McLaughlin, 2011). Thus, the current study focused on off-campus students explicitly within the local community context.

Equally important, there was a need to address behavior concerns central to town-gown tensions. The theory of sense of belonging provided a way to conceptualize the current study, as the need to belong is known as a pervasive driving source of motivation capable of eliciting outcomes including engagement, achievement, retention, persistence, optional functioning, and well-being (Hausmann et al., 2009; Rhee, 2008; Strayhorn, 2012). As a motivator of outcomes, could sense of belonging be a source of influence on behavioral choices in off-campus students? The current study explored this consideration, and in turn, evaluated environmental, social, and behavior factors that influenced sense of belonging.

Sample Profile

Attention to the demographic characteristics of the sample in the current study was warranted because off-campus students have been largely absent from town-gown research and subsumed in the vast, homogenous definition of commuters. Reliance on an antiquated definition of commuters mistakenly personifies commuters as either “townies” residing with their parents in the local community, or as non-traditional aged students who often live a considerable distance from campus and must balance education with competing life roles such as employment and family commitments (Jacoby, 2000a; Stewart & Rue, 1983). Sample demographics indicated off-campus students in the study differed from traditional commuter characteristics in several key ways.

Study respondents were traditional-aged students instead of non-traditional aged as commuter literature often depicts (Jacoby, 1989). Most students had lived on-campus before moving off-campus to the local community, which challenges the townie personification of living at home with one's parents and the notion commuters often live a considerable distance from campus, instead of locally (Jacoby, 2000a). Most participants lived with other students as roommates, which further challenges the townie personification and the notion commuters are balancing family responsibilities in their place of residence (Jacoby, 1989; Stewart & Rue, 1983). These demographics depict where off-campus students differ from the traditional conceptualization of commuters, while also revealing the similarity off-campus students share with their residential peers, who are also traditional-aged students with roommates (Hintz, 2011). Dugan et al. (2008) argued for this need to explore subpopulations of commuter students and residential students in greater depth, rather than continuing to rely on the residential experience in higher education as a normative benchmark for all students.

As the sample demographics illuminated departures from the traditional commuter student definition, the same demographic details affirm the descriptive terms used to characterize off-campus students broadly within town-gown literature and popular news media. Off-campus students are described as traditional-aged undergraduates (i.e., 18 - 22 years old) who have lived on-campus in residence halls before moving off-campus to the local community (Hintz, 2011). Most traditional off-campus students rent, live among dense enclaves of fellow students, and live independently of their guardians and direct supervision (Gumprecht, 2003; McLaughlin, 2011). The sample in the current study reflected this contemporary perception of off-campus students, thus providing empirical confirmation of what is known subjectively in town-gown practice.

The demographic composition of the current sample confirmed the characterization of off-campus students in the town-gown context. At the same time, the composition demonstrated the need for consideration of within-group differences in the commuter population, including identification of unique subpopulations within the broader commuter label. The current study confirmed and strengthened initial understandings of off-campus students in the town-gown context, while adding off-campus students as a population for further consideration in higher education research and practice.

Sense of Belonging in Off-Campus Students

The current study demonstrated background characteristics (age, sex, race, year in school, semesters lived on and off campus, number of roommates) of off-campus students were not significant predictors of sense of belonging and overall, demographics account for only 2% of the variance in belonging. These findings mirror what McLaughlin (2011) found when assessing the influence of demographic characteristics on sense of belonging for student residents of a near-campus neighborhood at Ohio State University. Similarly, Johnson et al. (2007) found demographic variables did not predict sense of belonging in their study of students of Color, with the only exception being gender as a predictor of belonging for Latino students.

In addition to background characteristics, the influence of residential density levels on sense of belonging was explored. Somewhat surprisingly, density levels were not significant predictors of sense of belonging; accounting for only 1% of the variance in sense of belonging. McLaughlin (2011) reported having neighborhood relationships or social ties increased feelings of belonging, so one might have reasonably anticipated living in an area of greater density of people would provide the opportunity to potentially develop a greater number of relationships, thus cultivating a greater sense of belonging. The current density finding does not support this

line of thinking but instead calls to question potential differences in the influence of density based on relationships or social ties and density based on physical quantity of people within an area. The predictive capacity of social ties on sense of belonging suggests density of relationships may be more valuable in cultivating belonging than density based on quantity of individuals in a specified unit of space. Further exploration of the role of density is warranted to evaluate the density finding of the current study.

Factors Influencing Sense of Belonging

The work of town-gown administrators often focuses on increasing the sense of belonging of off-campus students as a means of cultivating greater civility and better behavior in the local community context (Whitson, 2011/2013). Identifying factors to further enhance strategies used to promote sense of belonging was the stimulus behind evaluating the effectiveness of environmental, social, and behavior factors in influencing belonging. The factors explored (i.e., Factors, Perceptions, Relations, PosBehav, NegBehav) mirrored the factor components theorized by McMillan and Chavis (1986) and confirmed in the model of sense of community belonging by Chavis and Wandersman (1990). The items for Perceptions and Relations constructs were borrowed from McLaughlin (2011) because they aligned with the intention of the model of sense of community belonging (Chavis & Wandersman, 1990), yet offered language tailored to a town-gown context specifically.

Social Factors

The most important positive predictor of sense of belonging was the neighborhood perceptions factor (Perceptions), which demonstrated that perceptions or thoughts about one's neighborhood and neighbors, not necessarily the reality of the context or relationships, influenced sense of belonging. This finding corroborated the work of Johnson et al. (2007),

which concluded students' perceptions of the residence hall environment as socially supportive was a positive predictor of sense of belonging. The findings substantiated similar findings about neighborhood perceptions in work of Chavis and Wandersman (1990) and McLaughlin (2011).

The neighborhood relations factor (Relations) was not a significant predictor of belonging, which indicated actions (e.g., borrowing a tool) and social interactions (e.g., casual social visits) within the community did not influence belonging. In contrast, McLaughlin (2011) found the same Relations construct was the most significant, positive predictor of sense of belonging in his model and Chavis and Wandersman (1990) also documented a positive, significant finding for neighborhood relations. As such, the findings of the current study should be viewed with caution since they do not align with existing research. One possible explanation of the discrepancy lies in the difference of the community context and associated participants used in each study (McMillan & Chavis, 1986). The works of McLaughlin (2011) and Chavis and Wandersman (1990) focused on analysis of residents of a designated neighborhood, where the current study included student residents of the City of East Lansing broadly and referenced their neighborhood of residence but not a consistent neighborhood. This difference suggested sense of belonging to community may be location or context specific and perhaps better used in smaller scale contexts instead of community level evaluations.

Environmental Factor

The theory of sense of community articulated the importance of perceptions of problems in the environment (e.g., house conditions, litter, crime) in influencing feelings of community belonging. In the corresponding model developed and tested for sense of community belonging, the environmental factor was a non-significant predictor of sense of community belonging (Chavis & Wandersman, 1990). The current study confirmed the same finding as the

environmental factor was a non-significant predictor and did not contribute to the overall model of sense of belonging in off-campus students.

Demographic and Density Characteristics

Density and demographic characteristics, except for sex, were non-significant predictors in the model, which substantiated findings of McLaughlin (2011) about the role of background variables in his belonging model. For sex, the significant finding indicated males had a lower sense of belonging than females, which contrasted McLaughlin's (2011) finding that showed female student had less of a sense of belonging than males. One possible explanation for the discrepancy was McLaughlin's (2011) model of sense of belonging included a regression block about perceptions of crime and safety within the neighborhood, whereas the current study did not include this focus. McLaughlin (2011) attributed the directionality of his finding to perceptions that females had a lower sense of belonging because they felt less safe in the neighborhood. The current finding does not support or refute this claim but does showcase how additional variables in a model can influence the significance and directionality of one another.

Positive and Negative Behavior Factors

The final factors considered for their influence in predicting sense of belonging were the positive and negative behavior constructs. Created intentionally for the current study, the constructs aimed to ascertain the influence of participation in positive and negative behaviors in predicting sense of belonging. Participation in positive behaviors (e.g., attending neighborhood events, use of community services) was a significant positive predictor of belonging, which showed greater levels of participation in positive behaviors elicited greater feelings of belonging to the local community. Similarly, McLaughlin (2011) found participation in community building activities in a near-campus neighborhood was a significant, positive predictor of sense

of belonging in off-campus students. In multiple studies Strayhorn (2012) showed first-year students, Black male students, and students of Color increased their sense of belonging through involvement in positive activities, like student clubs and educationally purposeful activities, such as peer mentoring and living-learning communities. In contrast, participation in negative behaviors was not a significant predictor of sense of belonging. No additional empirical work was found to support or negate this finding, so it should be cautiously interpreted as an initial contribution regarding negative behavior participation and sense of belonging.

Exploration of Student Behaviors in a Town-Gown Context

The former half of the current study focused on gauging the sense of belonging of off-campus students and exploring factors that influenced this belonging. The latter half focused on investigating the role of demographics, density, environmental factors, social factors, and sense of belonging in predicting participation in positive and negative behaviors. Chavis and Wandersman (1990) advanced the premise that variables of influence in the model of sense of community belonging were dynamic and bidirectional in nature, demonstrating sense of belonging was “both a cause and effect in local action” in the community context (p. 73). Additionally, in the theory of belonging, Baumeister and Leary (1995) posited the innate human desire for belonging was sufficient to motive behavior. Subsequent research demonstrated the influence of sense of belonging in higher education on outcomes including engagement, achievement, retention, persistence, optional functioning, and well-being (Hausmann et al., 2009; Rhee, 2008; Strayhorn, 2012). The current study extended this exploration of sense of belonging as a motivator into the town-gown context by examining positive and negative behaviors as discussed below. The nature of this inquiry was exploratory more than confirmatory, as little is known about student behaviors in the town-gown context beyond what is portrayed through

limited literature available and the contextual and subjective relevance of town-gown practice (Hintz, 2011; Twohey, 2007).

Influences on Positive Behavior

Town-gown administrators expend effort to encourage positive community behavior with hope of cultivating greater sense of civic responsibility and community belonging in off-campus students. In turn, they hope feelings of greater belonging and care in the community translate into less involvement in negative or problematic behaviors in the local community. To this end, the current study investigated the influence of various factors in predicting positive behavior participation in off-campus students.

Density levels associated with living in a house emerged as a consistent positive predictor of participation in positive behaviors across all steps of the regression model, while density levels associated with apartment living were not significant at any step. This contrast raised a question about the nature and influence of density based on unit type (i.e., houses and apartments). Density in the current study was a calculation based on the number of individuals per unit of space, yet the finding suggested density, regardless of level (i.e., high, medium, low) did not equate to the same outcome in both unit types. Could density be experienced or perceived differently by the dwellers of each unit type? McLaughlin (2011) found simply having friends in one's neighborhood was not a predictor of neighborhood outcomes, where as having friendships that resulted from neighboring (networks of place) was a positive predictor of participation in a community building program and a positive predictor of social ties in the community. To parallel this thinking, suppose houses at all density levels allowed students to have greater numbers of interactions with their neighbors compared to the experience of apartment dwellers at comparable density levels, thus resulting in the predictive power of all

three house density variables. Another explanation for the different predictive influence of density in houses and apartments is opportunities for participation in positive behaviors were not equally available to dwellers of both unit types. The current study did not evaluate the frequency of offerings or the availability of opportunities, so the possibility of inequity is offered as an exploratory explanation, not a conclusive one.

Regardless of the unit type, the current study illustrated the role neighbors and neighborly relations had in influencing participation in positive behaviors in the local community. In early stages of the regression model, the neighborhood perceptions construct showed off-campus students' positive perceptions of their neighbors' friendliness, trustworthiness, and reliability, were associated with higher participation in positive behavior. Similarly, the neighborhood relations construct demonstrated increasing interaction between neighbors (e.g., loaning or borrowing a tool, helping with favors, casual social interactions) yielded higher participation in positive behaviors in the local community. Interestingly when the neighborhood relations construct was added to the model, neighborhood perceptions became non-significant, which suggested actual social interactions between neighbors were more predictive than conceptual perceptions of neighborly relations in cultivating positive behavior participation in off-campus students. The current finding substantiated Chavis and Wandersman's (1990) finding that neighboring relations, a construct expressed as friendships and levels of social engagement among neighbors, was a strong positive predictor of participation in a neighborhood association as the behavior they sought to elicit in neighbors.

Further evidence of the importance of peers and others in encouraging participation in positive behaviors was seen in the significant positive predictive power of number of roommates and number of semesters lived off-campus. In both instances, greater numbers of roommates and

more semesters lived off campus predicted greater frequency of participation in positive behaviors. This finding suggested having more roommates and living off-campus longer might afford off-campus students more opportunity to develop friendships and peer relationships, which in turn, exposed students to greater opportunities for participation in positive behaviors. The power of peer relationships in exposing students to diverse opportunities is documented in the work of Astin (1977/1993) and Pascarella and Terenzini (2005), as well as findings from the National Survey of Student Engagement (2013).

Moving beyond neighborly interactions, perceptions of environmental problems was a positive predictor of positive behavior participation. This finding illustrated off-campus students who perceived a greater sense of problems (i.e., traffic, litter, crime) were more likely to engage in positive behaviors in the local community. As off-campus students' perceptions of environmental concerns grew, were they spurred to participate in positive behaviors (e.g., use community resources and services, attend community events) in the local community? Seemingly contradictory, this notion aligned with Chavis and Wandersman's (1990) finding showing participants utilized community resources and were empowered to join a community organization as strategies to alleviate perceived neighborhood problems.

Lastly, sense of belonging emerged as a small, yet significant positive predictor of participation in positive behaviors in the local community. The smallness of the contribution demonstrated sense of belonging was not a crucial source of motivation alone for participation in positive behaviors, but rather interacted with other factors to influence behavior. Together, demographic characteristics, density levels, environmental factors, social factors, and sense of belonging predicted 29% of the variance in positive behavior participation in off-campus students. Strayhorn (2012) reached the same conclusion when discussing the success of graduate

students in reaching academic goals (i.e., dissertation completion, research projects) as a blend of factors including sense of belonging, socialization efforts, and student-faculty interactions.

Influences on Negative Behavior

Much the same with efforts to cultivate positive behavior participation, designing strategies to reduce negative behaviors in the local community were central to the work of town-gown administrators. The majority known about student behavior concerns in the town-gown context comes from news media, public opinion, and practical and professional knowledge of town-gown administrators. Thus, gaining insight into factors motivating off-campus students' participation in negative behaviors provides empirical data to guide refinement of town-gown efforts to reduce the frequency and severity of negative behaviors in the local community.

As found with positive behaviors, density was again a significant positive predictor of participation in negative behaviors in the local community. The difference being only high residential density (i.e., houses, not apartments) emerged as a positive predictor, no other levels of residential or apartment density were significant. This finding furthered the earlier notion dense housing areas were conduits for friendship development and subsequent exposure to negative behavior opportunities. Within the East Lansing context, large parties, excessive noise, and raucous student behaviors often originate in student-dominated neighborhoods near campus. A disproportionate number of calls city-wide for police, parking enforcement, and emergency services are drawn to these areas in response to negative behaviors (S. Webster, personal communication, April 5, 2017). In corroboration, areas of dense enclaves of students living side-by-side were noted as prominent hotbeds of town-gown behavioral concerns by Gumprecht (2008), Hintz (2011), and McLaughlin (2011). Additionally, greater perception of these problems (e.g., noise, parties, parking enforcement) in the environment was predictive of

negative behavior participation. This predictive relationship suggests greater awareness of these problems was sufficient to normalize participation in the same negative behaviors perceived in the community.

Several demographic characteristics were significant positive predictors of participation in negative behaviors in the current study, including sex, age, number of roommates, and semesters lived on-campus and off-campus. Males were more likely than females to participate in negative behaviors, which supported research from Kaplowitz and Campo (2004) that showed males were more likely than females to participate in riots, consume alcohol, and condone high-risk behaviors in a college environment. Having higher numbers of roommates and living off-campus longer were both associated with greater likelihood of negative behavior participation, perhaps another indication of the power of peer relationships to expose students to opportunities in the community, albeit negative behaviors instead of positive ones. Similarly, older students were more likely than their younger peers to engage in negative behaviors, which may reflect greater peer exposure to negative behaviors or more time to develop familiarity with opportunities for participation in negative behaviors.

Interestingly, number of semesters lived on-campus was also a positive indicator of negative behavior participation in the local community. One potential explanation for this finding lies in the transition from the structure of on-campus living to the freedom of off-campus living. Frequently, MSU undergraduates move off-campus after fulfilling the first-year campus residency requirement in pursuit of independent living and freedom from perceived restrictions of residence hall rules (S. Webster, personal communication, April 5, 2017). Hintz (2011) argued this independent living results in town-gown behavior concerns because most off-campus

students “possess limited knowledge of the rights and responsibilities of community living with little oversight” (p. 87).

Neighborhood perceptions and neighborhood relations again emerged as positive predictors of negative behaviors, as found earlier with positive behavior participation. This finding furthered the earlier argument that neighborly influence, either in interactions or perceptions of belonging, was sufficient to drive participation in behaviors, both positive and negative. In the current study, the power of peer influence was stronger in predicting negative behaviors ($B = .424$) than positive behaviors ($B = .287$) in the local community. As McLaughlin (2011) explained, perhaps finding a party to attend, alcohol to consume, and mischievous behavior to engage in was easier with friends and neighbors in a university-community context.

Lastly, sense of belonging proved not to be a significant step in the model, nor a significant predictor of negative behavior participation. In one way, this finding conflicted with a fundamental town-gown strategy aimed at cultivating community belonging to induce greater caring and civility thereby reducing negative behavior participation. Equally important, sense of belonging was not a reliable predictor of negative behavior participation, suggesting town-gown administrators might not have to worry efforts to increase sense of belonging to the local community might also elicit increases in negative behavior participation. Instead, this finding illustrated other variables intervened with greater influence in promoting negative behaviors participation in the town-gown context. Likewise, Chavis and Wandersman (1990) depicted sense of community belonging as being interactional and bidirectional in nature, suggesting interplay between variables was dynamic much like the many influences present in community living. This bidirectional premise was upheld by Strayhorn (2012) who described a “chicken before the egg scenario” in reference to his suggestion sense of belonging can influence an

outcome of interest, but the reverse may also be true (p. 102). Considering the exploratory nature of the current study, the non-significance of sense of belonging in predicting negative behaviors should be considered with caution and as an indication further exploration is needed.

Comparing Positive and Negative Behaviors

Having examined predictors of each behavior type in the two prior sections, attention is now turned to considering influences on both behavior types in tandem. Analyzing positive and negative behaviors alongside one another provided an opportunity to compare and contrast the predictors associated with each behavior type. This broader view of both behavior types helps to illustrate patterns of association among predictors and behaviors.

In considering the influence of predictor variables, a Venn diagram is a useful concept to visualize the overlap and divergence of predictor variables in relation to one another and their association with behavior types. Figure 2 is a Venn diagram representing the associations of the neighborhood perceptions, neighborhood relations, and sense of belonging predictors in research question three. The areas of overlap in Figure 2 are labeled to correspond to the behavior type predicted by the indicated predictor variables in the regression analysis of student behaviors.

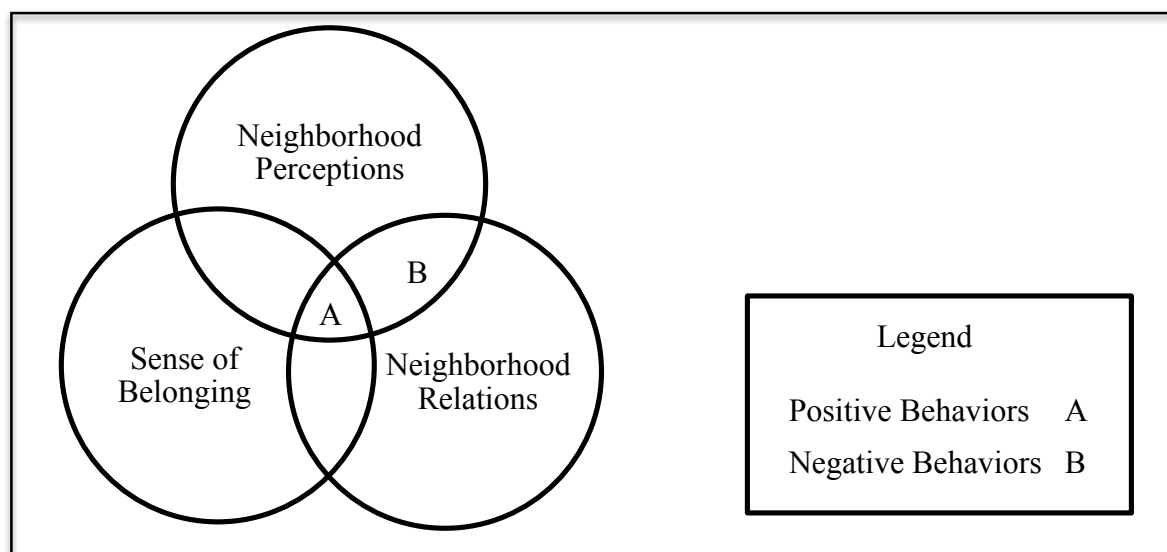


Figure 2. Venn Diagram of Predictors Associated with Positive and Negative Behaviors

The interpretation of Figure 2 provides an important observation about the influence of the predictor variables in predicting positive and negative behaviors. Segment A shows the joint influence of neighborhood perceptions, neighborhood relations, and sense of belonging predicted positive behaviors, while segment B shows the presence of neighborhood perceptions and neighborhood relations, without sense of belonging, predicted negative behaviors. All things being equal, the presence of sense of belonging in the regression analysis was associated with positive behaviors, while the absence of sense of belonging was associated with negative behaviors. This notion shows neighborly interactions (i.e., relations and perceptions) between neighbors are associated with both behavior types, while the addition of belonging and care in the interactions predicts positive behaviors.

Baumeister and Leary (1995) offer insight into the role of belonging in behaviors with their discussion of human interactions without an ongoing bond of caring. Their work indicates people have a need for relatedness and mutual caring in interactions sustained over time. The authors argue interactions absent relatedness and caring leave individuals dissatisfied and yearning for belonging. Baumeister and Leary (1995) demonstrate the presence of belonging in interactions is associated with positive outcomes, such as happiness, health, and general welfare, while the absence of belonging in interactions is associated with outcomes including depression and loneliness.

To parallel this thinking, neighborly interactions characterized by feelings of belonging and care predict positive behavior outcomes, while interactions alone predict negative behaviors. For town-gown administrators, this notion justifies why efforts to cultivate belonging are worthwhile and necessary if positive behaviors are the desired outcome of neighborhood programming. Town-gown programs that stop short of cultivating belonging and focus instead

on promoting neighborly interactions alone are linked to negative behaviors instead of the desired positive behaviors.

Contributions and Implications of the Current Study

The current study drew from three distinct areas of higher education scholarship, namely literature on commuter students, town-gown relations, and sense of belonging in college. Together, the literature dovetailed with practice to provide the structure and support for the current study dedicated to the exploration of off-campus students' sense of belonging to the local community. Contributions and implications are offered in line with these three areas of literature and practice.

Contributions to Theory and Research

In higher education, the term commuter student has long been known as broadly inclusive of students based on a shared commonality of not living in university-owned housing (Jacoby, 1989; Stewart & Rue, 1983) while simultaneously being limiting due to a lack of recognition of the diversity inherent within the commuter population (Dugan et al., 2008; Jacoby, 1989). In response to this limitation, the current study advanced exploration of the within-group diversity of the commuter population by focusing empirical attention on off-campus students explicitly. Demographic characteristics of the sample validated off-campus students were distinct from the antiquated, homogenous conceptualization of commuters and instead shared similarity with their residence hall peers. These results demonstrated the need for nuanced attention to off-campus students and other subpopulations subsumed within the commuter population. Research focused on these subpopulations would further reveal within-group differences in the commuter population and inform the design of higher education services and resources tailored to these subpopulations. Additionally, similarities found between off-campus students and residence hall

students expose a need to delve deeper in comparative analysis of the two groups. Commuter literature is replete with studies comparing the college experience and associated outcomes of commuter students with those of residential students. In consideration of this existing literature, growing acknowledgment of the diversity inherent in the commuter population suggests a need to revisit past research to ascertain if conclusions reached initially remain true for the commuter population and its many subpopulations.

Within higher education research, sense of belonging was used to study various student cohorts including students of Color (Hausmann et al., 2009; Hurtado & Carter, 1997; Johnson et al., 2007; Strayhorn, 2012), residential students (Johnson et al., 2007), first-year students (Hoffman et al., 2002), graduate students (Strayhorn, 2012), and part-time students (Kember, Lee, & Li, 2001). The current study contributed to this established body of student-focused belonging literature by introducing off-campus students into sense of belonging research. Adding a new student cohort expands the inclusivity of belonging research and provides further opportunity to explore and refine understanding of the role sense of belonging plays in eliciting student outcomes in a diverse student population. The local community context of the current study also extended belonging research beyond campus boundaries, as prior research focused on classroom and campus belonging (Freeman et al., 2007), residence hall belonging (Johnson et al., 2007), and university belonging generally (Hurtado & Carter, 1997; Rhee, 2008). This extension beyond campus boundaries acknowledges the reality that for off-campus students, the local community is a significant part of their collegiate experience as their place of residence during college. Further research should delve into the effects the off-campus environment has on college outcomes of the students who live there.

Much of existing town-gown literature has focused on organizational level interactions to navigate shared opportunities and challenges in the university and local municipality context (Kemp, 2013). Prior research has examined areas including economic development (O'Mara, 2012; Porter & Grogan, 2002/2013), public service demands (Martin & Samels, 2006/2013; Nichols, 1990), and amenities such as arts, culture, and entertainment (Baker-Minkel et al., 2004; Warfield, 1995). The current study drew attention to the student experience in the town-gown context and focused on student behaviors as a central component of town-gown tensions. Insight into off-campus students' participation in positive and negative behaviors provides initial data to drive further inquiry and exploration aimed at reducing student behavior concerns that elicit town-gown tensions. The current study also adds off-campus students to town-gown literature, as most prior studies have focused on other stakeholder groups including university administrators and municipal leaders (Bruning et al., 2006) and non-student residents (Kittle, 2005). The current study examined off-campus students' feelings of belonging, factors influencing this belonging, and their participation in various behaviors in the local community. These findings are offered as a starting point and underscore a need for further exploration of the off-campus student experience.

Lastly, the current study employed a novel approach to studying student populations in higher education, namely the use of Geographic Information System (GIS) mapping to ascertain measures of student density in living environments. Using GIS mapping, density categories (i.e., high, medium, low) based on unit types (i.e., houses, apartments) were created and subsequent analysis considered the influence of density in predicting sense of belonging and student behaviors in off-campus students. Although a first effort, the potential to gain insight into the role density plays in a myriad of student outcomes is immense.

Contributions to Practice and Policy

The conceptualization for the current study emerged from the researcher's experience as a student affairs professional engaged in town-gown relations. With a basis in practice, there are several contributions and implications from the current study meant to inform practice. For student affairs and town-gown professionals working with off-campus students, there has long been a lack of empirical data about off-campus students (Kemp, 2013). The current study shed light on off-campus students to both address this absence and to provide needed insight into the student population central to town-gown relations work. Demographic characteristics collected in the study provide an initial descriptive profile of off-campus students, which expands and compliments anecdotal and subjective estimations of the population. Further, knowledge of the descriptive profile provides practitioners with the opportunity to make informed decisions about resource and service delivery to off-campus students with sensitivity to the demographic make-up of the group, rather than operating with a general premise of the group. Furthermore, often university resources (e.g., staff, budget) dedicated to supporting off-campus students and commuters are limited, while university support for their residential peers is ample (Dugan et al., 2008). With recognition of the sheer size of the off-campus population at MSU ($N = 13,432$), town-gown administrators can use empirical data gained in the current study to substantiate their pursuit of additional resource allocation dedicated to supporting off-campus students.

The current study also provided an initial exploration of off-campus students' sense of belonging to the local community where they reside. Results of the current study showed demographic characteristics, except for sex, were not significant contributors to sense of belonging. For town-gown practitioners, this revelation suggests regardless of demographic differences or similarities, off-campus students are starting at a similar baseline in terms of their

sense of belonging to the local community. Thus, efforts to cultivate belonging should focus on interactions, activities, and offerings happening in real-time within the local community, instead of nuanced approaches based on differing demographics. The one caveat was the significance of the sex variable, which indicated off-campus male students had less sense of belonging than off-campus female students. For practitioners, this difference between males and females suggests additional effort and interactions with males is warranted to help raise their sense of belonging to the community.

In support of the emphasis on interactions and activities, the neighborhood perceptions construct emerged as a significant positive predictor of sense of belonging in off-campus students, while the neighborhood relations (e.g., social interactions) did not. For practitioners, this finding underscores the importance of outreach efforts dedicating to influencing positive perceptions of the local community, such as emphasizing community norms around friendliness, trust and respect among neighbors, and feelings of responsibility for one's actions and property. In contrast, the non-significance of neighborhood interactions suggests traditional town-gown efforts to encourage neighborly interactions, such as casual greetings or helping with a favor (Hintz, 2011; McLaughlin, 2011), are not yielding the anticipated gains in sense of belonging. Town-gown administrators should re-evaluate their outreach efforts and potentially invest more attention into cultivating positive perceptions instead of championing neighborly interactions within the environment. That said, participation in positive behaviors in the local community was also a significant predictor of sense of belonging in off-campus students. Town-gown administrators should continue to encourage off-campus students to attend community and neighborhood events and to utilize community services and resources as these engagements are positively associated with higher sense of belonging. These efforts should include promoting

awareness of opportunities and sponsoring neighborhood events designed to engage off-campus students.

To shed light on student behaviors at the center of town-gown tensions, the current study also looked at the influence of various factors on off-campus students' participation in positive and negative behaviors in the local community. The influence of peers emerged as a significant predictor in both positive and negative behavior participation. Having higher numbers of roommates was associated with greater participation in positive and negative behaviors, suggesting having more peers in your residential unit provided access and awareness of opportunities for both types of behavior participation. Knowing the influence of roommates, town-gown practitioners should focus outreach on residential units with higher numbers of occupants to address negative behaviors, while efforts to encourage positive behaviors may be best tailored to students living alone or with fewer roommates who appear to have less exposure to opportunities. Similarly, the neighborhood relations construct was also a positive predictor of both positive and negative behaviors, suggesting increasing social interactions among neighbors was associated with participation in both behavior types. As with roommates, there is a likelihood increasing interactions with neighbors also exposes students to increased opportunities for both positive and negative behaviors. For town-gown practitioners, this insight means acknowledging efforts to promote neighborly interactions are both helping to increase desired positive behaviors in the community, while also simultaneously increasing the undesired negative behaviors. Town-gown administrators should think deliberately about ways to refine and target outreach efforts to lessen the potential role they may be playing in cultivating the negative behaviors they aim to address.

Time spent living off-campus and on-campus also emerged as a significant predictor of behavioral participation. Increasing time spent living off-campus was associated with greater participation in positive and negative behaviors, suggesting a greater familiarity of opportunity and access. Greater time living on-campus before moving to the local community emerged as a positive predictor of negative behavior, suggesting off-campus students free from residence hall rules are seeking opportunities to engage in negative behaviors (e.g., attend parties, consume alcohol) and may not be familiar with local community expectations, such as noise and party ordinances. For town-gown practitioners, these findings underscore a value in focusing tailored attention and resources on students who are newer to off-campus living and those who have previously lived in residence halls. Newer student residents to the local community would benefit from exposure to resources outlining positive behavior opportunities, while also clarifying behavioral expectations around municipal ordinances and neighborhood norms.

Interestingly, increasing perception of problems in the local environment was a positive predictor of positive and negative behaviors. As off-campus students had an increasing sense of community problems, they seemed to be motivated to access and utilize community services and resources (e.g., positive behaviors) to address their concerns, while simultaneously be validated to participate in negative behaviors, such as attending or hosting parties and consuming alcohol. This finding presents a challenge because town-gown practitioners want off-campus students to feel empowered to seek solutions to perceived problems but do not want students to feel like the presence of the problems (e.g., presence of noise, litter, unkempt properties) makes participation in negative behaviors less significant or problematic to the local community. Town-gown practitioners might be best to consider efforts to further support civic agency while also raising awareness of the harm caused by negative behaviors in the community.

Residential density proved to be a significant predictor in positive and negative behaviors. For positive behaviors, all levels of density associated with living in a house were significant, while none of the apartment levels were significant, suggesting house dwellers participate in positive behaviors more than their apartment peers. In recognition of this finding, town-gown practitioners should refine outreach efforts to better illuminate opportunities for positive behavior participation among apartment dwellers. For negative behaviors, areas of high house density emerged as the sole positive predictor of negative behavior participation. For town-gown practitioners, this finding confirms geographic areas with a high density of houses and many off-campus residents are centers of negative behaviors. Efforts to address negative behaviors should continue to be wide-spread, but extra effort and strategies specific to the high-density residential areas are warranted.

Lastly, sense of belonging emerged as a positive predictor of positive behaviors but not of negative behaviors. For town-gown administrators, this finding confirms efforts to promote sense of belonging to the local community do influence greater participation in positive behaviors, while having no effect in negative behavior participation. Town-gown practitioners are faced with the notion their efforts to cultivate belonging are not translating into reduction in negative behaviors, but are contributing greater positive behavior participation in the local community instead. This reality suggests efforts designed around promoting belonging do have merit and will translate into greater participation in positive behaviors from off-campus students. As sense of belonging increases among more off-campus students, perhaps greater participation in positive behaviors will influence the overall wellbeing and harmony of the local community. At the same time, town-gown practitioners must recognize other factors (i.e., environmental factors, density, neighborhood relations) are more significant influencers of negative behavior

participation and subsequent outreach efforts and resources should be adapted and tailored to address factors that make a difference in negative behavior participation.

Recommendations for Future Research

The current study focused on off-campus students as a subpopulation of commuter students and central actors in the town-gown context. Despite initial insight attained through this study, additional research on off-campus students is warranted. Future research should delve into understanding off-campus students as a subpopulation of college students and to identify their unique student experience, challenges, and needs for support within the collegiate context. Additionally, the current study focused on undergraduate students specifically because of their role in student behavior problems in the town-gown context. There are no doubt graduate students who are also part of the off-campus population and their experience should also be explored and included in what is known about off-campus students. Future use of qualitative methodology may be ideal to explore the experience of off-campus students and bring their voice to the town-gown context specifically and higher education, more broadly.

Density was a new variable used in the current study, which proved to be a significant one. Initial findings of influence associated with density should be examined more fully to confirm the directionality and power of influence found in the current study. Additionally, density of houses and number of roommates emerged as significant predictors of behaviors. Considering this finding, future research should differentiate between single rental houses likely to have fewer roommates and larger group houses, like fraternity and sorority houses, with many student residents. There may also be merit in further distinguishing different apartment types (e.g., large, multiple-building complex, small single building) and their corresponding densities. Relatedly, future exploration of dwelling unit type (e.g., apartment, house) would illuminate how

physical design and structure of dwelling type influences feelings of belonging regardless of density. Another important consideration associated with density was the notion of exploring density as a measure of individuals in a geographic area (as was the case in the current study) and the idea of density of relationships, or social network, in a geographic area. Further exploration of both density types would provide insight on how peer networks and physical proximity to peers compare in their influence on off-campus students in the local community. One of the two types may prove to be a more valuable indicator of the experience of off-campus students in the town-gown context.

The construct for positive and negative behavior participation was a new component designed specifically for the current study. Although a reliable measure in the current study, the new behavior construct should be further evaluated to confirm its validity and explore its utility across different samples and contexts. There is an opportunity to use pilot testing to explore expanding the lists of behaviors included in the construct. The positive behaviors construct could grow to include a balance of items measuring positive event or initiative participation (e.g., attend a neighborhood event; use city of services) and positive neighboring behaviors (e.g., yard maintenance, care and respect for neighbors). For negative behaviors, consideration should be given to delineating between lesser negative behaviors (e.g., attending a party, consuming alcohol) and more serious negative behaviors where there may be a judicial or municipal consequence possible (e.g., noise or alcohol violation, fight). Exploratory factor analysis could help to discern naturally occurring patterns within the list of negative behaviors. Efforts to develop a more comprehensive but refined set of behaviors for town-gown research would strengthen future research utilizing the behaviors construct and ultimately better inform town-gown practice.

The sense of belonging off-campus students felt to the local community was the central component of the current study. This study was an initial effort at exploring sense of belonging to a community external to the university itself and beyond campus boundaries. The intent in studying an external community was to acknowledge students are likely to experience feelings of belonging to multiple communities that together influence their lived experience in college. Just as there is credence in recognizing the multiple identities students possess as they interact in the college context and world at large, there may be value in also understanding how their feelings of belonging across various communities influence their student experience. Further exploration seems worthwhile given the known importance sense of belonging has in eliciting positive student outcomes in higher education. Future research should continue to explore the sense of belonging of college students across their co-existing communities of support and influence.

Lastly, GIS mapping was a tool employed in the current study that would be a powerful addition to future studies in higher education across a myriad of dimensions and topics. GIS mapping provides the opportunity to visualize, analyze, and interpret data of all kinds to understand relationships and patterns. Demographic data from the current study could be further mapped to reveal patterns and trends among off-campus students. For example, mapping students by age, year in school, or sex might reveal patterns by housing type (e.g., house, apartment), density level, or distance from campus that exist. The same mapping in subsequent years could reveal patterns of transience or movement among off-campus students. This type of data-driven knowledge would be extremely valuable to town-gown practitioners and policy makers as they make resource decisions (e.g., materials, staffing) about outreach efforts and strategies for working with off-campus students and town-gown relations. GIS mapping employed in higher education research and practice could aid in decision making for program

and service offerings and implementation, improve organizational efficiencies around staffing demands and scheduling, and promote data-driven fiscal and human resource allocation for research projects and administrative initiatives.

Summary

The current chapter included a restatement of the purpose of this study, a discussion of the findings associated with each research question, a consideration of implications for research and practice, and suggestions for future research. The current study emerged from the need to address student behavior issues in the town-gown community and the practical need to know more about off-campus students as central actors in these behaviors. This study validates the need to further explore off-campus students as a unique cohort within the college student population as the sample revealed off-campus students were distinct from traditional perceptions of commuter students. Analyses confirmed town-gown efforts to promote perceptions of community belonging and to encourage participation in positive behaviors yield increases in sense of belonging to the local community. Findings suggested town-gown strategies to influence off-campus student behaviors should differ based on residential density of houses and apartments. Peer relations were found to be instrumental in encouraging participation in both positive and negative behaviors, confirming town-gown strategies aimed at reducing problem behaviors should continue to focus attention on social relations and promoting positive behaviors as normative in the local community. The factors and characteristics identified to predict sense of belonging and behavior participation should be used to augment existing town-gown strategies to support off-campus students, while also guiding the careful design and purposeful implementation of new efforts to address student behavior issues in the local community. The current findings provide an empirical baseline from which to move forward in policy and

practice. Lastly, this study has demonstrated the importance of focused attention on supporting off-campus students and advocates for their inclusion in future town-gown research. This inclusion is essential if universities and communities are serious about wanting a more harmonious and supportive town-gown relationship for the betterment of both entities.

APPENDICES

APPENDIX A

Map 1

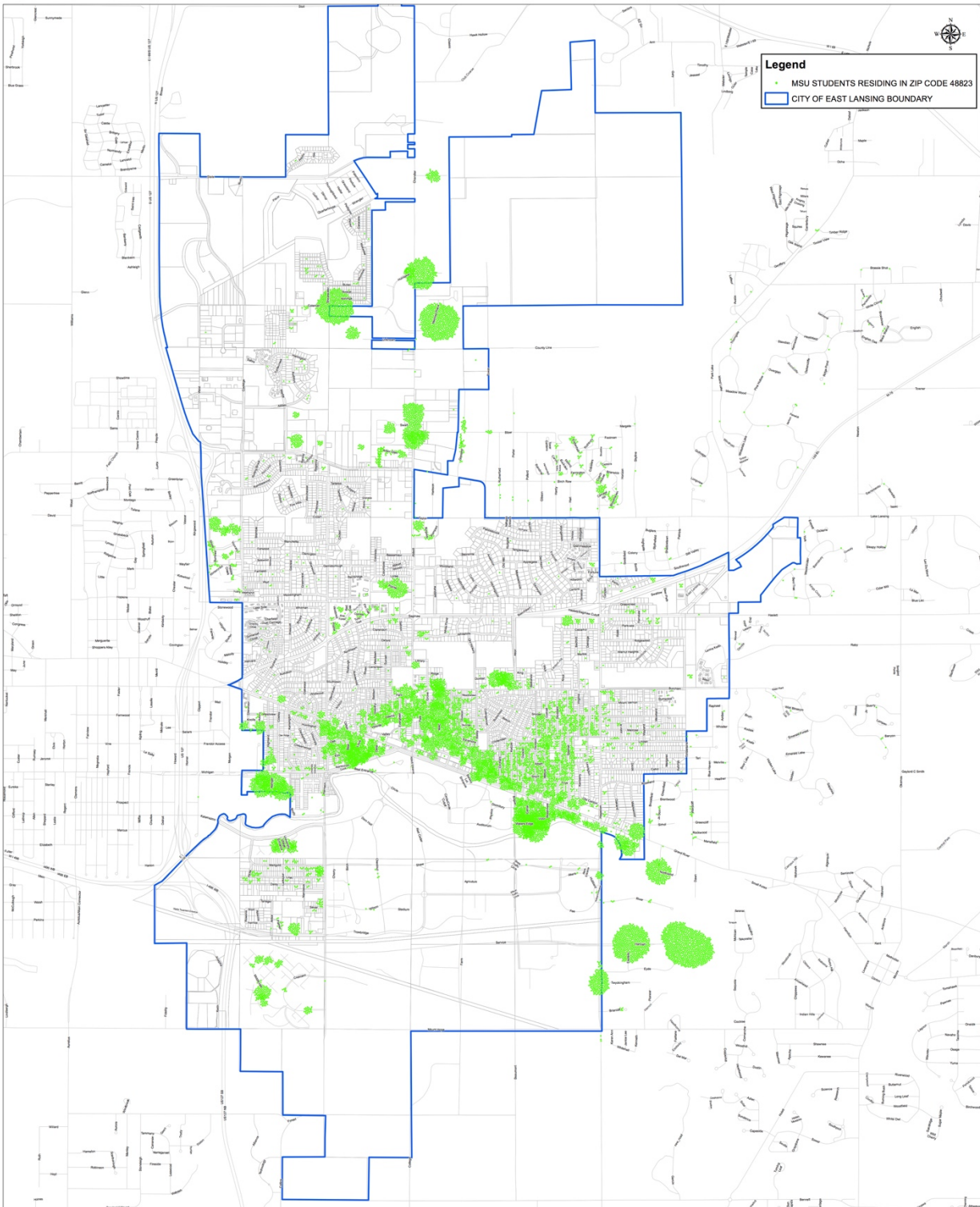


Figure 3. Map 1: Off-Campus Students in City of East Lansing ZIP Code

APPENDIX B

Map 2

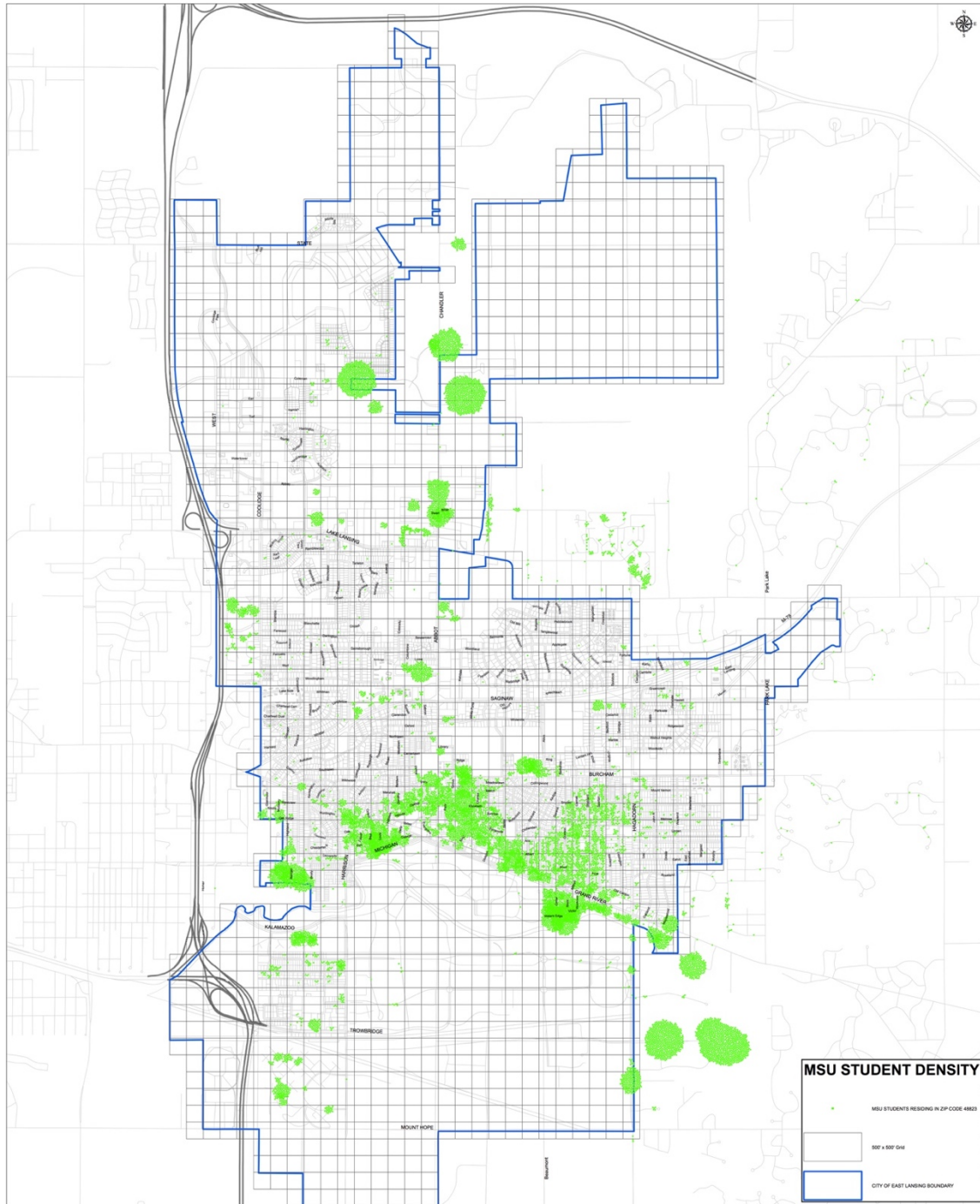


Figure 4. Map 2: Off-Campus Students in East Lansing ZIP Code with Grid Overlay

APPENDIX C

Map 3

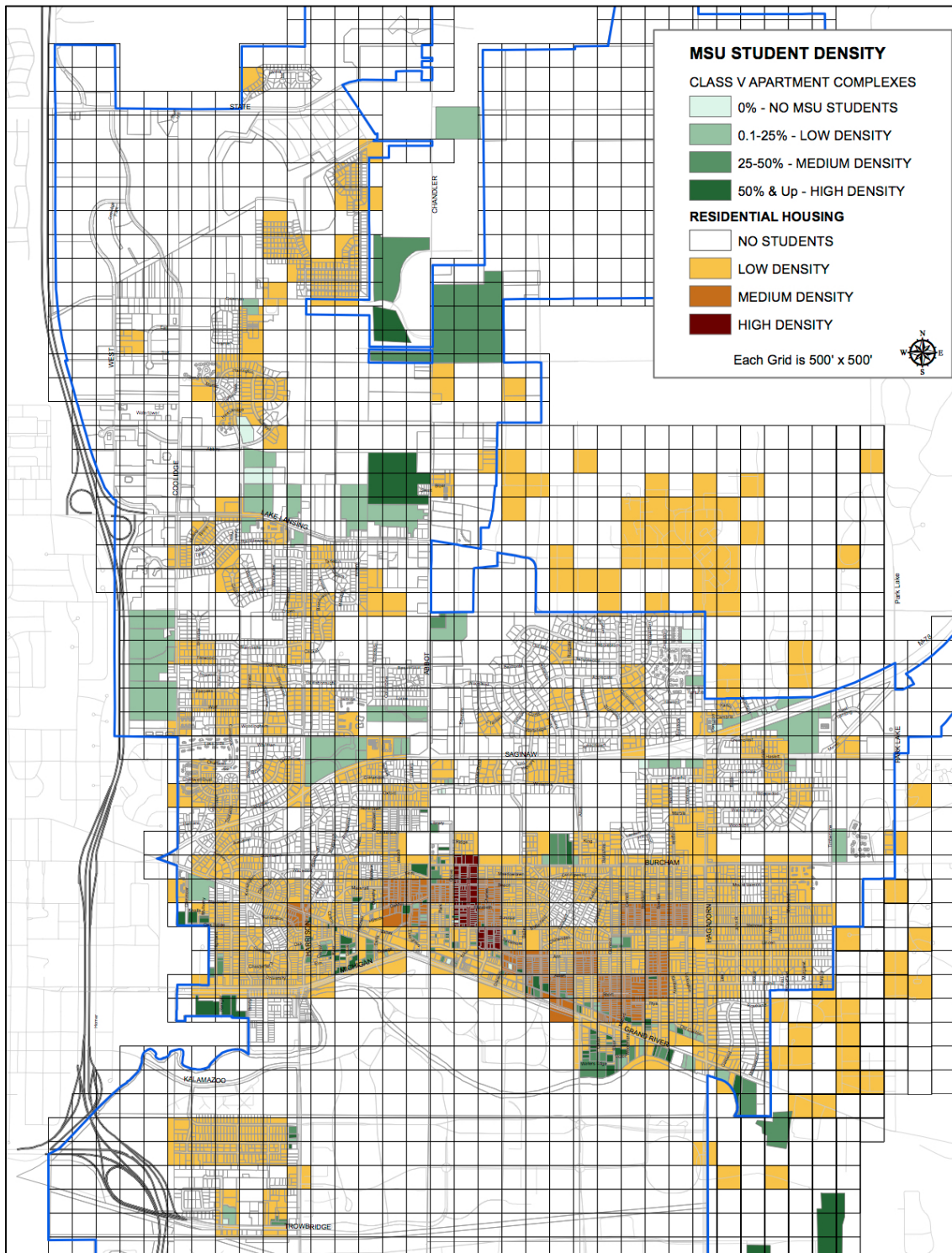


Figure 5. Map 3: Density Categories Based on Off-Campus Students in East Lansing ZIP Code

APPENDIX D

Map 4

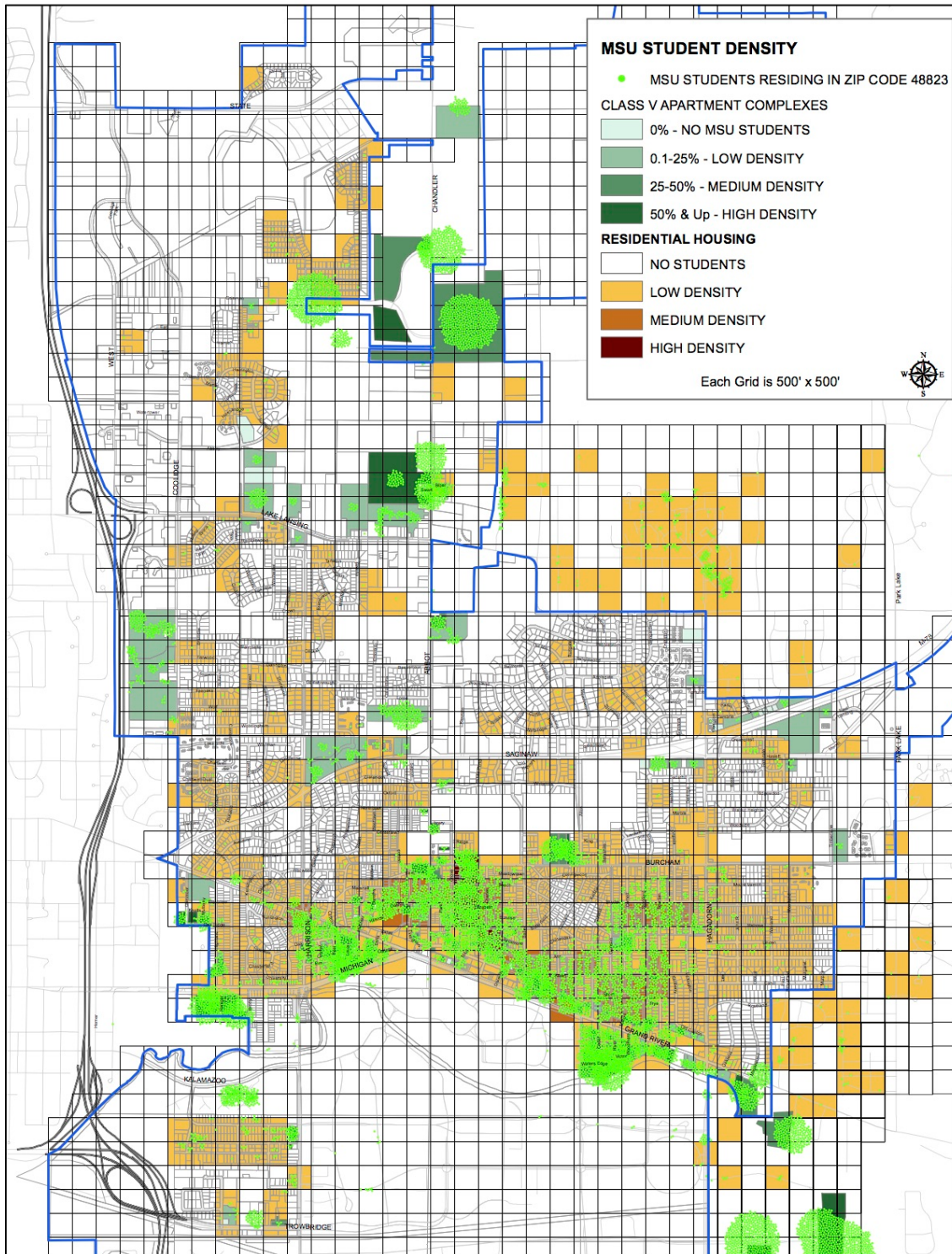


Figure 6. Map 4: Density Categories and Off-Campus Student Data in East Lansing ZIP Code

APPENDIX E

Participant Consent Form for Research Study

Study title: Examining Sense of Belonging and Student Behaviors in a Town-Gown Context

Researcher: Erin Carter, doctoral candidate in Higher, Adult, and Lifelong Education (HALE)

Department and Institution: Educational Administration, Michigan State University

Purpose of Research:

The purpose of this research project is to learn about your sense of belonging to the off-campus community you reside in during your time as a student at Michigan State University. I am interested in understanding which factors contribute to your sense of belonging to the community, such as the neighborhood environment and your interactions with community members. I am also interested in examining how your sense of belonging may influence your participation in a range of behaviors within the community from social activities to civic responsibilities.

You will be asked to complete a survey with questions regarding your experience and actions living off-campus in the City of East Lansing while a student at Michigan State University. Your survey answers will be used for further statistical analysis by me only. You must be at least 18 years old to participate in this research.

Potential Benefits: There is a possibility you will not benefit from participating in this research. However, all responders to the survey are offered an opportunity to enter a drawing for one chance to win \$100 toward their rent expense. If you choose to enter this drawing, your contact information will be collected by a separate system and will not be connected in any way to your survey responses. You are not required to finish the survey to enter the drawing.

Potential Risks:

There are no foreseeable risks associated with participation in this study. However, if you wish, you may, at any time and without penalty, elect not to answer a question on the survey or you may discontinue participating without fear of any harm or repercussions.

Confidentiality and Privacy:

The data for this project are being collected by survey using a software called Qualtrics. The Qualtrics software disassociates identifiable student information from survey responses so the researchers will NOT be able to link your survey data to you. Survey responses from all participants will be pooled and reported collectively to further aid in maintaining confidentiality.

Voluntary Participation:

Participation in this research project is completely voluntary. You have the right to say no. You may change your mind at any time and withdraw. You may choose not to answer specific questions or to stop participating at any time. Whether you choose to participate or not will have no effect on you or any potential benefits from this research.

Request for Additional Information:

If you have any questions about this research, please contact Erin Carter, the doctoral student conducting this research study at carte221@msu.edu. If you have concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact – anonymously, if you wish, Dr. Matthew Wawrzynski, 429 Erickson Hall, Michigan State University, (517) 355-6617.

Clicking the “I Agree” button and beginning the survey, indicates your voluntary agreement to participate in this study.

APPENDIX F

Sense of Belonging Survey Instrument

Instructions: This survey is designed to learn more about your sense of belonging to the local community you reside in during college. Please answer each of the questions on the survey. Individual responses will be anonymous. Thank you for your responses.

Sense of Belonging Measures

Instructions: Complete the following questions about your sense of belonging to the City of East Lansing community

1= Strongly Disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly Agree

- | | | | | | | |
|---|---|---|---|---|---|---|
| 1 | I feel that I am a member of the East Lansing community. | 1 | 2 | 3 | 4 | 5 |
| 2 | I see myself as part of the East Lansing community. | 1 | 2 | 3 | 4 | 5 |
| 3 | I feel a sense of belonging to the City of East Lansing. | 1 | 2 | 3 | 4 | 5 |
| 4 | I feel a sense of belonging to Michigan State University. | 1 | 2 | 3 | 4 | 5 |

- 5 **In thinking about my experience as both an MSU student and a resident of East Lansing, I feel my sense of belonging is:**

stronger to East Lansing than MSU	Equal between East Lansing and MSU	stronger to MSU than East Lansing	to neither East Lansing or MSU
--------------------------------------	---------------------------------------	--------------------------------------	-----------------------------------

Factors Influencing Sense of Belonging

I. Perception of Belonging

Instructions: Complete the following questions about your perceptions of belonging to your specific residential neighborhood using the following scale:

1= Strongly Disagree 2= Disagree 3= Neutral 4= Agree 5= Strongly Agree

- | | | | | | | |
|----|--|---|---|---|---|---|
| 6 | There are people I can rely on among my neighbors. | 1 | 2 | 3 | 4 | 5 |
| 7 | People trust each other in my neighborhood. | 1 | 2 | 3 | 4 | 5 |
| 8 | I feel I belong in my neighborhood. | 1 | 2 | 3 | 4 | 5 |
| 9 | I care about what my neighbors think of my actions (e.g., if I take care of my property, how I act, etc.)? | 1 | 2 | 3 | 4 | 5 |
| 10 | I feel close to some of my neighbors. | 1 | 2 | 3 | 4 | 5 |
| 11 | People in my neighborhood are usually warm and friendly. | 1 | 2 | 3 | 4 | 5 |
| 12 | We look out for one another in this neighborhood. | 1 | 2 | 3 | 4 | 5 |

II. Perception of the Environment

Instructions: In thinking about your neighborhood of residence, select the level of significance you would give each potential problem in your neighborhood:

1= Not a problem	2= Minor problem	3= Moderate problem	4= Major problem
13	Condition of houses		1 2 3 4
14	Traffic		1 2 3 4
15	Street parking		1 2 3 4
16	Crime		1 2 3 4
17	Litter		1 2 3 4
18	Noisy neighbors		1 2 3 4
19	Unkempt lawns		1 2 3 4
20	Garbage collection		1 2 3 4
21	Recycling collection		1 2 3 4
22	Police services		1 2 3 4
	a) do you see this as enough, not enough, too much?		
23	Parking services (enforcement)		1 2 3 4
	a) do you see this as enough, not enough, too much?		

III. Neighborhood Relations

Instructions: Answer the following questions regarding your interactions with your neighbors.

1= Very Unlikely	2= Unlikely	3= Not Sure	4= Likely	5= Very Likely
24	How likely is it that I would ask a neighbor to borrow something like a hammer (if they had one and I need one)?		1 2 3 4 5	
25	How likely is it that I would ask a neighbor to borrow something like money?		1 2 3 4 5	
26	How likely is it that a neighbor would ask me to borrow something, like a hammer (if I had one and they needed one)?		1 2 3 4 5	
27	How likely is it that a neighbor would ask me to borrow something, like money?		1 2 3 4 5	
28	How likely is it that I would get help from a neighbor? (e.g., watch my place if I am away, feed my pet, collect my mail)?		1 2 3 4 5	
29	How likely is it that I would help a neighbor (e.g., watching their place if they are away)?		1 2 3 4 5	

Instructions: Answer the following regarding your interactions with your neighbors.

**1= Very Seldom/Never 2= Seldom (once every 3 months)
3= Sometimes (once per month) 4=Often (once per week) 5= Very Often (daily)**

- | | | | | | | |
|----|--|---|---|---|---|---|
| 30 | How often do I greet my neighbors when I see them? | 1 | 2 | 3 | 4 | 5 |
| 31 | How often do I casually visit with neighbors, either going over to their place or them coming to mine? | 1 | 2 | 3 | 4 | 5 |
| 32 | How often do I participate in neighborhood activities (e.g., cookouts, parties)? | 1 | 2 | 3 | 4 | 5 |
| 33 | How often do I talk to neighbors who are students? | 1 | 2 | 3 | 4 | 5 |
| 34 | How often do I talk to neighbors who are non-students? | 1 | 2 | 3 | 4 | 5 |
| 35 | How often do people in this neighborhood do favors for each other? | 1 | 2 | 3 | 4 | 5 |

Participation in Behaviors

Instructions: Indicate the frequency in which you have participated in each of the following activities or actions in the past six months.

**1= Very Seldom/Never 2= Seldom (once every 3 months) 3= Sometimes (once per month)
4=Often (once per week) 5= Very Often (daily)**

- | | | | | | | |
|----|---|---|---|---|---|---|
| 36 | When seasonally appropriate, how often do I do yard maintenance, like mowing, raking, or shoveling? | 1 | 2 | 3 | 4 | 5 |
| 37 | How often do I use trash and recycling services at my residence? | 1 | 2 | 3 | 4 | 5 |
| 38 | How often do I attend a party in my neighborhood? | 1 | 2 | 3 | 4 | 5 |
| 39 | How often do I host a party at my residence? | 1 | 2 | 3 | 4 | 5 |
| 40 | How often do I consume alcohol? | 1 | 2 | 3 | 4 | 5 |
| 41 | How often do I receive an alcohol violation from police? | 1 | 2 | 3 | 4 | 5 |
| 42 | How often is loud noise coming from my residence (e.g. music)? | 1 | 2 | 3 | 4 | 5 |
| 43 | How often have I received a noise violation ticket at my residence? | 1 | 2 | 3 | 4 | 5 |
| 44 | How often do I get into a fight with people in my neighborhood? | 1 | 2 | 3 | 4 | 5 |
| 45 | How often do I pick up litter or trash in my yard? | 1 | 2 | 3 | 4 | 5 |
| 46 | How often do I participate in community-wide activities (e.g., Farmer's Market, Taste of East Lansing, live music)? | 1 | 2 | 3 | 4 | 5 |
| 47 | How often do I use city resources or services (e.g., public library, community center, parks, recreation facilities)? | 1 | 2 | 3 | 4 | 5 |

Demographic Information

Instructions: Answer the following questions about you and your place of living.

During spring semester 2016:

- | | | | | | | |
|----|--|-----------------------------------|---------------------------|----------------------|---------------------------|---------------------|
| 48 | What type of property do I live in? | House | Apartment | Housing Cooperative | Greek House | Other (please list) |
| 49 | Who do I live with?
- sub question: what percentage of the people who live with me are also affiliated with MSU? | Alone | With roommate(s) (list #) | With parent/guardian | Partner/significant other | Other (please list) |
| 50 | a) What percentage of people who live near me are also affiliated with MSU?
b) What percentage of people are not affiliated with MSU? | Enter percentages for both parts. | | | | |

Think about your MSU college experience,

- | | | | | | | |
|----|---|---|---|---|---|---|
| 51 | Prior to living off-campus, how many semesters did I live on-campus in a residence hall or university apartment? | 0 | 1 | 2 | 3 | 4 |
| 52 | How many semesters have I lived off-campus, including the current semester? | 1 | 2 | 3 | 4 | 5 |

Demographics - about you

- | | | | | | | |
|----|--------------------------------|---------------------------------|-------------|-----------------------|-------------|---------------------|
| 53 | What is my age? | Enter a number in years | | | | |
| 54 | What is my gender? | Male | Female | Transgender | | |
| 55 | What is my year in school? | First year | Second year | Third year | Fourth Year | Other (please list) |
| 56 | What is my citizenship status? | Domestic student (U.S. Citizen) | | International student | | |

During spring semester 2016:

- 57 Which best describes my racial/ethnic background?
Please check all the apply.
- ☐ Black or African American
- ☐ White (Not Hispanic/Not Latino)
- ☐ Hispanic or Latino
- ☐ American Indian
- ☐ Asian
- ☐ Native Hawaiian or Pacific Islander
- ☐ Multiracial (Having parents of more than one race)
- ☐ Member of race not listed above: _____

Survey End - Optional drawing entry

- 58 Do you wish to enter the drawing for a chance to win \$100 for use toward your rent?
- Yes- branch to drawing
- No - branch to thank you for completing the study

APPENDIX G

Construct Development and Alpha Reliability for Items Used in Study

Table G1

Construct Development and Alpha Reliability for Items Used in Study

Sense of Belonging (SoBT)	Mean	SD	Alpha if item deleted
Likert scale: 1 = Strongly disagree to 5 = Strongly Agree			
I feel that I am a member of the East Lansing community.	3.77	.942	.850
I see myself as part of the East Lansing community	3.77	.944	.839
I feel a sense of belonging to the City of East Lansing	3.74	.957	.909
Cronbach's alpha reliability	.907		
Environmental Factors (Factors)	Mean	SD	Alpha if item deleted
Likert scale: 1 = Not a Problem to 4 = Major Problem			
Condition of houses	1.93	.865	.774
Traffic	1.93	.889	.775
Street parking	2.63	1.160	.782
Crime	2.03	.896	.771
Litter	2.21	.889	.767
Noisy neighbors	2.15	.942	.780
Unkempt lawns	1.49	.706	.771
Garbage collection	1.46	.726	.772
Recycling collection	1.95	1.117	.796
Police services	1.49	.795	.770
Parking enforcement services	2.20	1.176	.786
Cronbach's alpha reliability	.793		
Neighborhood Perceptions (Perceptions)	Mean	SD	Alpha if item deleted
Likert scale: 1 = Strongly Disagree to 5 = Strongly Agree			
There are people I can rely on among my neighbors.	3.18	1.112	.843
People trust each other in my neighborhood.	3.33	.918	.858
I feel I belong in my neighborhood.	3.39	.953	.853
I care about what my neighbors think of my actions (e.g., if I take care of my property, how I act, etc.)?	3.37	1.030	.881
I feel close to some of my neighbors.	2.86	1.189	.848
People in my neighborhood are usually warm and friendly.	3.54	.867	.860
We look out for one another in this neighborhood.	3.12	.961	.845
Cronbach's alpha reliability	.874		

Table G1 (cont'd)

Neighborhood Relations (Relations)	Mean	SD	Alpha if item deleted
Likert scale: 1 = Very Unlikely to 5 = Very Likely			
How likely is it that I would ask a neighbor to borrow something like a hammer (if they had one and I need one)?	3.05	1.353	.896
How likely is it that I would ask a neighbor to borrow something like money?	1.30	.692	.909
How likely is it that a neighbor would ask me to borrow something, like a hammer (if I had one and they needed one)?	2.89	1.301	.896
How likely is it that a neighbor would ask me to borrow something, like money?	1.42	.793	.909
How likely is it that I would get help from a neighbor? (e.g., watch my place if I am away, collect mail)?	2.56	1.327	.898
How likely is it that I would help a neighbor (e.g., watching their place if they are away)?	3.25	1.284	.903
Likert Scale: 1 = Very Seldom/Never to 5 = Very Often (daily)			
How often do I greet my neighbors when I see them?	3.13	1.280	.901
How often do I casually visit with neighbors, either going over to their place or them coming to mine?	1.98	1.230	.896
How often do I participate in neighborhood activities (e.g., cookouts, parties)?	1.86	1.108	.901
How often do I talk to neighbors who are students?	2.85	1.346	.899
How often do I talk to neighbors who are non-students?	1.66	.991	.909
How often do people in this neighborhood do favors for each other?	2.02	1.070	.896
Cronbach's alpha reliability	.909		
Positive Behaviors (PosBehav)	Mean	SD	Alpha if item deleted
Likert Scale: 1 = Very Seldom/Never to 5 = Very Often (daily)			
When seasonally appropriate, how often do I do yard maintenance, like mowing, raking, or shoveling?	2.10	1.247	.528
How often do I use trash and recycling services at my residence?	3.86	.926	.626
How often do I pick up litter or trash in my yard?	2.31	1.235	.519
How often do I participate in community-wide activities (e.g., Farmer's Market, Taste of East Lansing, live music)?	1.98	.976	.523
How often do I use city resources or services (e.g., public library, community center, parks, recreation facilities)?	2.54	1.184	.572
Cronbach's alpha reliability	.611		

Table G1 (cont'd)

Negative Behaviors (NegBehav)	Mean	SD	Alpha if item deleted
Likert Scale: 1 = Very Seldom/Never to 5 = Very Often (daily)			
How often do I attend a party in my neighborhood?	2.28	1.163	.672
How often do I host a party at my residence?	2.13	1.026	.670
How often do I consume alcohol?	3.40	1.097	.733
How often do I receive an alcohol violation from police?	1.16	.602	.712
How often is there loud noise coming from my residence (e.g. music)?	2.25	1.151	.709
How often have I received a noise violation ticket at my residence?	1.21	.624	.703
How often do I get into a fight with people in my neighborhood?	1.18	.558	.716
Cronbach's alpha reliability		.735	

APPENDIX H

Correlation Matrix of Predictor and Criterion Variables

Table H1

Correlation Matrix of Predictor and Criterion Variables

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Age	1																				
2. Sex	.124**	1																			
3. Race1	-.078	-.068	1																		
4. Race2	.062	.028	-.808**	1																	
5. Race3	.041	.074	-.522**	-.080	1																
6. YrSchool	.717**	.045	.023	.053	-.115**	1															
7. LiveOn	-.033	-.127**	.034	-.035	-.007	.158**	1														
8. LiveOff	.499**	.019	.043	-.024	-.038	.617**	-.082*	1													
9. RoomLog	-.133**	.017	.103*	-.063	-.083*	-.019	.116**	.057	1												
10. AptHigh	-.157**	-.100*	.007	.025	-.049	-.196**	.045	-.171**	-.039	1											
11. AptMed	.014	.017	-.092*	.035	.106*	.006	.005	-.062	-.234**	-.353**	1										
12. AptLow	.093*	-.039	.000	-.030	.043	.078	-.071	.087*	-.248**	-.202**	-.162**	1									
13. ResHigh	-.032	-.005	.028	.014	-.068	.021	-.042	.068	.210**	-.198**	-.159**	-.091*	1								
14. ResMed	.087*	.069	.115**	-.100*	-.050	.119**	.086*	.105*	.275**	-.274**	-.220**	-.126**	-.123**	1							
15. ResLow	.050	.073	-.036	.037	.007	.049	-.059	.067	.080	-.291**	-.233**	-.134**	-.131**	-.181**	1						
16. SoBT	-.073	-.083*	.029	-.015	-.028	-.040	.057	.025	.066	.026	-.122**	-.010	.073	.040	.020	1					
17. Perception	-.061	.039	-.011	-.021	.049	-.049	.082*	.061	.073	.028	-.144**	-.030	.107**	.085*	-.011	.421**	1				
18. Factors	-.015	-.046	.015	-.059	.060	.008	-.030	.091*	.108**	-.011	.002	-.045	.161**	-.023	-.052	.026	-.001	1			
19. Relations	-.061	.067	-.009	-.031	.060	-.059	.036	.069	.153**	-.016	-.136**	-.048	.172**	.099*	-.013	.286**	.707**	.066	1		
20. PosBehav	.056	.022	.091*	-.081*	-.036	.089*	.025	.164**	.240**	-.137**	-.237**	-.053	.218**	.226**	.101*	.218**	.310**	.139**	.398**	1	
21. NegBehav	-.104*	.174**	.057	-.082*	.022	-.059	.054	.052	.305**	-.026	-.138**	-.086*	.257**	.119**	-.052	.141**	.330**	.207**	.495**	.370**	1

Note. * $p < 0.05$, ** $p < 0.01$ level (2-tailed)

APPENDIX I

Collinearity Statistics for Final Regression Models

Table I1

Research Question One: Collinearity Statistics for Final Hierarchical Regression Model of Background Characteristics and Density Levels on Sense of Belonging^a (n=589)

Model 2	Unstandardized Coefficients		Standardized Coefficients		Collinearity Diagnostics		
	B	Std. Error	β	<i>t</i>	Sig.	Tolerance	VIF
Step 1:							
Age	-.134	.139	-.061	-.969	.333	.432	2.316
Sex	-.365	.229	-.067	-1.596	.111	.957	1.045
Race2	.019	.347	.002	.054	.957	.978	1.022
Race3	-.096	.514	-.008	-.186	.852	.936	1.068
YrSchool	-.190	.211	-.064	-.904	.366	.339	2.952
LiveOn	.127	.087	.065	1.457	.146	.857	1.167
LiveOff	.178	.112	.087	1.600	.110	.568	1.760
RoomLog	-.018	.526	-.002	-.034	.973	.936	1.068
Step 2:							
AptMed	-.592	.306	-.094	-1.938	.053	.709	1.410
AptLow	-.072	.431	-.008	-.168	.867	.789	1.268
ResHigh	.563	.436	.059	1.291	.197	.801	1.249
ResMed	.239	.361	.032	.663	.508	.703	1.423
ResLow	.139	.337	.020	.413	.680	.743	1.345

Note. ^a Results presented are from the second and final step of the analysis.

Table I2

Research Question Two: Collinearity Statistics for Final Hierarchical Regression Model of Demographic, Density, Factors, Perceptions, Relations, and Behavioral variable on Sense of Belonging^a (n=589)

Model 6	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	Collinearity Diagnostics	
	B	Std. Error	β			Tolerance	VIF
Step 1							
Age	-.091	.127	-.041	-.714	.475	.426	2.346
Sex	-.465	.215	-.086	-2.168	.031	.895	1.117
Race2	.036	.318	.004	.113	.910	.959	1.043
Race3	-.376	.473	-.031	-.795	.427	.910	1.099
YrSchool	-.037	.193	-.013	-.193	.847	.331	3.018
LiveOn	.029	.080	.015	.367	.714	.830	1.205
LiveOff	.025	.103	.012	.239	.811	.547	1.830
RoomLog	.057	.493	.005	.116	.908	.426	1.400
Step 2							
AptMed	-.222	.282	-.035	-.788	.431	.697	1.434
AptLow	.051	.395	.005	.130	.897	.786	1.272
ResHigh	.042	.413	.004	.103	.918	.745	1.342
ResMed	-.077	.337	-.010	-.228	.820	.672	1.487
ResLow	.098	.312	.014	.314	.754	.720	1.388
Step 3							
Factors	.007	.017	.015	.378	.706	.906	1.104
Step 4							
Perceptions	.208	.026	.425	7.927	.000	.486	2.059
Step 5							
Relations	-.014	.015	-.052	-.897	.370	.408	2.449
Step 6							
PosBehav	.076	.033	.102	2.265	.024	.695	1.438
NegBehav	-.006	.031	-.010	-.204	.839	.614	1.627

Note. ^a Results presented are from the sixth and final step of the analysis.

Table I3

Research Question Three: Collinearity Statistics for Final Hierarchical Regression Model of Background, Density, and Sense of Belonging on Positive Behavior Participation^a (n=589)

Model 6	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	Collinearity Diagnostics	
	B	Std. Error	β			Tolerance	VIF
Step 1:							
Age	.125	.161	.042	.777	.437	.428	2.336
Sex	-.091	.267	-.013	-.343	.732	.928	1.078
Race2	-.562	.401	-.050	-1.401	.162	.964	1.037
Race3	-.459	.598	-.028	-.767	.443	.910	1.099
YrSchool	.064	.245	.016	.263	.793	.331	3.017
LiveOn	.006	.101	.002	.059	.953	.832	1.202
LiveOff	.131	.131	.048	1.004	.316	.548	1.824
RoomLog	1.046	.613	.070	1.706	.089	.739	1.353
Step 2:							
AptMed	-.444	.356	-.053	-1.249	.212	.699	1.431
AptLow	.309	.499	.025	.619	.536	.787	1.271
ResHigh	2.097	.512	.164	4.096	.000	.775	1.290
ResMed	1.955	.418	.197	4.677	.000	.698	1.432
ResLow	1.407	.390	.148	3.610	.000	.741	1.350
Step 3							
Factors	.054	.022	.091	2.509	.012	.938	1.066
Step 4							
Perceptions	.017	.035	.026	.493	.622	.438	2.284
Step 5							
Relations	.102	.018	.287	5.628	.000	.476	2.099
Step 6							
SoBT	.119	.053	.089	2.263	.024	.804	1.243

Note. ^a Results presented are from the sixth and final step of the analysis.

Table I4

Research Question Three: Collinearity Statistics for Final Hierarchical Regression Model of Background, Density, and Sense of Belonging on Negative Behavior Participation^a (n=589)

Model 6	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	Sig.	Collinearity Diagnostics	
	B	Std. Error	β			Tolerance	VIF
Step 1:							
Age	-.240	.174	-.070	-1.382	.167	.428	2.336
Sex	1.428	.289	.171	4.947	.000	.928	1.078
Race2	-.555	.434	-.043	-1.278	.202	.964	1.037
Race3	.035	.647	.002	.054	.957	.910	1.099
YrSchool	-.111	.265	-.024	-.419	.675	.331	3.017
LiveOn	.154	.110	.051	1.398	.163	.832	1.202
LiveOff	.135	.141	.043	.956	.339	.548	1.824
RoomLog	2.897	.664	.169	4.365	.000	.739	1.353
Step 2:							
AptMed	-.301	.385	-.031	-.782	.435	.699	1.431
AptLow	-.040	.540	-.003	-.073	.942	.787	1.271
ResHigh	1.732	.554	.118	3.124	.002	.775	1.290
ResMed	.207	.453	.018	.458	.647	.698	1.432
ResLow	-.523	.422	-.048	-1.240	.215	.741	1.350
Step 3							
Factors	.097	.023	.141	4.115	.000	.938	1.066
Step 4							
Perceptions	-.017	.038	-.023	-.457	.648	.438	2.284
Step 5							
Relations	.172	.020	.424	8.805	.000	.476	2.099
Step 6							
SoBT	.009	.057	.006	.154	.878	.804	1.243

Note. ^a Results presented are from the sixth and final step of the analysis.

APPENDIX J

Sample Variance Tests for Sense of Belonging

Table J1

Sample T-test of Sense of Belonging as a Function of Sex (N = 589)

Construct	Female n = 376		Male n = 213		df	t
	Mean	SD	Mean	SD		
SoBT	11.44	2.58	11.00	2.65	587	.045*

Note. * $p < .05$, ** $p < .01$

Table J2

Means, Standard Deviations, One-way Analysis of Variance on Sense of Belonging as a Function of Race (N = 589)

Construct	White n = 495		People of color n = 65		International n = 29		F (3, 586)	η^2
	Mean	SD	Mean	SD	Mean	SD		
SoBT	11.32	2.57	11.17	3.11	10.97	2.096	.313	.00

Note. * $p < .05$, ** $p < .01$

Table J3

Means, Standard Deviations, One-way Analysis of Variance on Sense of Belonging as a Function of Year in School (N = 589)

Construct	First n = 3		Second n = 92		Third n = 224		Fourth n = 228		Fifth n = 35		Other n = 7		F (5, 583)	η^2
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
SoBT	11.67	2.89	11.29	2.41	11.39	2.40	11.27	2.76	10.69	3.29	11.00	3.27	.47	.00

Note. * $p < .05$, ** $p < .01$

Table J4

Means, Standard Deviations, One-way Analysis of Variance on Sense of Belonging as a Function of Semesters Lived On-Campus (N = 589)

Construct	Zero n = 88		One n = 45		Two n = 276		Three n = 15		Four n = 165		<i>F</i> (4, 584)		η^2
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
SoBT	10.51	2.69	12.07	2.21	11.39	2.53	10.60	2.06	11.36	2.77	3.40**		.02

Note. * $p < .05$, ** $p < .01$

Table J5

Means, Standard Deviations, One-way Analysis of Variance on Sense of Belonging as a Function of Semesters Lived Off-Campus (N = 589)

Construct	One n = 12		Two n = 211		Three n = 21		Four n = 186		Five n = 159		<i>F</i> (4, 584)		η^2
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
SoBT	12.08	1.56	11.20	2.68	10.86	2.99	11.17	2.70	11.51	2.42	.853		.01

Note. * $p < .05$, ** $p < .01$

Table J6

Means, Standard Deviations, One-way Analysis of Variance on Sense of Belonging as a Function of Density (N = 589)

Construct	AptHigh n = 180		AptMed n = 130		AptLow n = 50		ResHigh n = 48		ResMed n = 86		ResLow n = 95		<i>F</i> ^a (5, 583)		η^2
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD			
SoBT	11.38	2.64	10.68	2.97	11.20	2.63	11.92	2.16	11.53	2.52	11.40	2.18	2.08		.02

Note. * $p < .05$, ** $p < .01$. ^a Welch's robust test of equality of means used due to violation of assumption of homogeneity.

APPENDIX K

Hierarchical Regression Analysis for Research Question One

Table K1

Research Question One: Hierarchical Regression of Demographic and Density on Sense of Belonging (n=589)

Predictors	Model 1	Model 2
	β	β
Step 1		
Age	-.056	-.056
Sex	-.066	-.066
Race2	.000	.002
Race3	-.021	-.008
YrSchool	-.069	-.064
LiveOn	.061	.065
LiveOff	.099	.087
RoomLog	.044	-.002
Step 2		
AptMed		-.094
AptLow		-.008
ResHigh		.059
ResMed		.032
ResLow		.020
R	.148	.190
R ²	.022	.036
Adj. R ²	.008	.014
ΔR^2		.014
ΔF		1.702

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX L

Hierarchical Regression Analysis for Research Question Two

Table L1

Research Question Two: Hierarchical Regression of Demographics, Density, Factors, Perceptions, Relations, and Behaviors on Sense of Belonging (n=589)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Predictors	β	β	β	β	β	β
Step 1						
Age	-.056	-.061	-.060	-.036	-.036	-.041
Sex	-.066	-.067	-.067	-.090*	-.089*	-.086*
Race2	.000	.002	.003	.000	.000	.004
Race3	-.021	-.008	-.009	-.035	-.034	-.031
YrSchool	-.069	-.064	-.064	-.009	-.011	-.013
LiveOn	.061	.065	.065	.015	.015	.015
LiveOff	.099	.087	.086	.015	.017	.012
RoomLog	.044	-.002	-.003	.009	.011	.005
Step 2						
AptMed		-.094	-.094	-.041	-.041	-.035
AptLow		-.008	-.007	.008	.008	.005
ResHigh		.059	.058	.018	.020	.004
ResMed		.032	.033	.009	.010	-.010
ResLow		.020	.020	.029	.030	.014
Step 3						
Factors			.010	.022	.023	.015
Step 4						
Perceptions				.413**	.432**	.425**
Step 5						
Relations					-.028	-.052
Step 6						
PosBehav						.102*
NegBehav						-.010
R	.148	.190	.190	.442	.442	.450
R ²	.022	.036	.036	.195***	.196***	.203***
Adj. R ²	.008	.014	.013	.174	.173	.178
R ² Δ		.014	.000	.159	.000	.007
F Δ		1.702	.061	113.198***	.260	2.578

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX M

Hierarchical Regression Analysis for Research Question Three: Positive Behaviors

Table M1

Research Question Three^a: Hierarchical Regression of Demographics, Density, Factors, Perceptions, Relations, and Sense of Belonging on Positive Behavior Participation (n=589)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Predictors	β	β	β	β	β	β
Step 1						
Age	.032	.021	.025	.039	.039	.042
Sex	.018	.000	.005	-.010	-.020	-.013
Race2	-.066	-.054	-.049	-.051	-.050	-.050
Race3	-.022	.001	-.007	-.023	-.031	-.028
YrSchool	-.022	-.036	-.035	-.001	.015	.016
LiveOn	.015	.029	.032	.001	.004	.002
LiveOff	.147**	.116*	.105*	.061	.049	.048
RoomLog	.228**	.093*	.084	.091*	.071	.070
Step 2						
AptMed		-.088	-.089*	-.056	-.056	-.053
AptLow		.014	.017	.027	.025	.025
ResHigh		.226***	.214***	.189***	.165***	.164***
ResMed		.219***	.223***	.208***	.198***	.197***
ResLow		.141***	.146***	.152***	.150***	.148***
Step 3						
Factors			.098**	.106**	.093**	.091**
Step 4						
Perceptions				.259***	.065	.026
Step 5						
Relations					.284***	.287***
Step 6						
SoBT						.089*
<i>R</i>	.292	.421	.432	.499	.536	.542
<i>R</i> ²	.085***	.177***	.186***	.249***	.287***	.294***
Adj. <i>R</i> ²	.073	.159	.167	.229	.267	.273
<i>R</i> ² Δ		.092	.009	.062	.039	.006
<i>F</i> Δ		12.843***	6.447**	47.497***	30.923***	5.123*

Note. ^a DV= positive behaviors; * $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX N

Hierarchical Regression Analysis for Research Question Three: Negative Behaviors

Table N1

Research Question Three^b: Hierarchical Regression of Demographics, Density, Factors, Perceptions, Relations, and Sense of Belonging on Negative Behavior Participation (n=589)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Predictors	β	β	β	β	β	β
Step 1						
Age	-.097	-.090	-.085	-.069	-.070	-.070
Sex	.191***	.194***	.201***	.186***	.170***	.171***
Race2	-.052	-.050	-.043	-.045	-.043	-.043
Race3	.026	.043	.031	.014	.002	.002
YrSchool	-.083	-.084	-.084	-.048	-.024	-.024
LiveOn	.066	.074	.080*	.047	.051	.051
LiveOff	.137**	.124**	.107*	.061	.043	.043
RoomLog	.271***	.206***	.192***	.199***	.169***	.169***
Step 2						
AptMed		-.063	-.065	-.030	-.031	-.031
AptLow		-.016	-.010	.000	-.003	-.003
ResHigh		.198***	.179***	.153***	.118***	.118***
ResMed		.042	.049	.033	.018	.018
ResLow		-.060	-.051	-.045	-.048	-.048
Step 3						
Factors			.152***	.160***	.141***	.141***
Step 4						
Perceptions				.269***	-.020	-.023
Step 5						
Relations					.424***	.424***
Step 6						
SoBT						.006
<i>R</i>	.382	.442	.466	.533	.608	.608
<i>R</i> ²	.146***	.195***	.217***	.284***	.370***	.370***
Adj. <i>R</i> ²	.135	.177	.198	.266	.352	.351
<i>R</i> ² Δ		.049	.022	.067	.086	.000
<i>F</i> Δ		7.022***	16.042***	53.810***	77.646***	.024

Note. ^b DV = negative behaviors; * $p < .05$, ** $p < .01$, *** $p < .001$

REFERENCES

REFERENCES

- Astin, A.W. (1977). *Four critical years: Effects of college on beliefs, attitudes, and knowledge*. San Francisco, CA: Jossey-Bass.
- Astin, A. W. (1993). *What matters in college? Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Baker-Minkel, K., Moody, J. & Keiser, W. (2004). Town and gown. *Economic Development Journal*, 7-15.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.
- Blankinship, D. G. (2008, August 8). Universities try to control students off campus. *NBCNews.com*. Retrieved from http://www.nbcnews.com/id/26349148/ns/us_news-education/t/universities-try-control-students-campus/#.VBzdytdV69
- Bollen, K. A., & Hoyle, R. H. (1990). Perceived cohesion: A conceptual and empirical examination. *Social Forces*, 69(2), 479-504.
- Bruning, S. D., McGrew, S. & Cooper, M. (2006). Town–gown relationships: Exploring university–community engagement from the perspective of community members. *Public Relations Review*, 32, 125–130.
- Chavis, D. M., & Wandersman, A. (1990). Sense of community in the urban environment: A catalyst for participation and community development. *American Journal of Community Psychology*, 18(1), 55-81.
- City of East Lansing (2015a, May 1). *Major Employers*. Retrieved from <http://www.cityofeastlansing.com/365/Major-Employers>
- City of East Lansing (2015b, May 1). *Quick Facts*. Retrieved from <http://www.cityofeastlansing.com/367/Quick-Facts>
- Colorado State University (2014). *Off-campus life*. Retrieved from <http://www.offcampuslife.colostate.edu>
- Community Relations Coalition (2013). *About us*. Retrieved from <http://www.wealllivehere.org/about-us.html>
- Cossick, S. (2009, April 22). City passes noise ordinance. *The Daily Athenaeum*. Retrieved from http://www.thedaonline.com/article_3d1f243b-eee4-55a0-bead-ff9bfd1771b6.html

- Council for the Advancement of Standards in Higher Education (2012). *CAS professional standards for higher education* (8th ed.). Washington, DC: Author.
- DeVellis, R. F. (1991). *Scale development: Theory and applications*. Newbury Park, CA: Sage.
- Dugan, J.P., Garland, J. L., Jacoby, B., & Gasiorski, A. (2008). Understanding commuter student self-efficacy for leadership: A within-group analysis. *NASPA Journal*, 45(2), 282-310.
- Florida, R. (2013, October). The boom towns and ghost towns of the new economy. *The Atlantic*. Retrieved from <http://www.theatlantic.com/magazine/archive/2013/10/the-boom-towns-and-ghost-towns-of-the-new-economy/309460/>
- Freeland, R.M. (2005, May 13). Universities and cities need to rethink their relationships. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com>
- Freeman, T., Anderman, L., & Jensen, J (2007). Sense of belonging in college freshman at the classroom and campus levels. *The Journal of Experimental Education*, 75(3), 203-220.
- Gumprecht, B. (2003). The American college town. *The Geographical Review*, 93(1), 51-80.
- Gumprecht, B. (2008). *The American college town*. Amherst, MA: University of Massachusetts Press.
- Harasta, J. (2008). *Town-gown relations: University and neighborhood leaders' perceptions of college and community relations*. (Doctoral dissertation). Retrieved from ProQuest dissertations and theses. (UMI number: 3292899)
- Hausmann, L. R. M., Shofield, J. W., & Woods, R. L. (2007). Sense of belonging as a predictor of intentions to persist among African American and White first-year college students. *Research in Higher Education*, 48(7), 803-839.
- Hausmann, L. R. M., Ye, F., Schofield, J. W., & Woods, R. L. (2009). Sense of belonging and persistence in White and African American first-year students. *Research in Higher Education*, 50(7), 649-669.
- Hintz, J.R. (2011). Peer educators responding to an institutional challenge: Off campus student services. In L. B. Williams (Ed.), *Emerging issues and practices in peer education* (New Directions for Higher Education, No. 133, pp. 87-95). San Francisco, CA: Wiley.
- Hoffman, M., Richmond, J., Morrow, J., & Salomone, K. (2002). Investigating “sense of belonging” in first-year college students. *Journal of College Student Retention*, 4(57), 227-256.
- Hubbard, P. (2009). Geographies of studentification and purpose-built student accommodation: Leading separate lives? *Environment and Planning A*, 41, 1903-1923.

- Hurtado, S., & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education*, 70, 324-345.
- IBM (n.d.). *Pairwise vs. listwise: What are they and when should I use them?* Retrieved from <http://www01.ibm.com/support/docview.wss?uid=swg21475199>
- International Town-Gown Association. (2013a). Mission and vision. Retrieved from <http://www.itgau.org/content.aspx?ContentID=1438>
- International Town-Gown Association (2013b, September). *International town-gown assessment 2013*. Retrieved from <http://www.itga.org/userfiles/files/ITGA%20Survey%20Assessment%20Executive%20Summary.pdf>
- International Town-Gown Association (2014, August). *International town-gown assessment 2014*. Retrieved from <https://www.itga.org/userfiles/files/ITGA%20Survey%20Summary%202014-3.pdf>
- Jacoby, B. (1989). *The student as commuter: Developing a comprehensive institutional response*. ASHE-ERIC Higher Education Report, 7. Washington, DC: The George Washington University.
- Jacoby, B. (2000a). Involving commuter students in learning: Moving from rhetoric to reality. In B. Jacoby & Associates (Eds.), *Involving commuter students in learning* (New Directions for Higher Education, No. 109, pp. 81-87). San Francisco, CA: Jossey-Bass.
- Jacoby, B. (2000b). Why involve commuter students in learning? In B. Jacoby & Associates (Eds.), *Involving commuter students in learning* (New Directions for Higher Education, No. 109, pp. 3-12). San Francisco, CA: Jossey-Bass.
- Jacoby, B., & Garland, J. (2004). Strategies for enhancing commuter student success. *Journal of College Student Retention*, 6(1), 61-79.
- Johnson, D. R., Soldner, M., Leonard, J. B., Alvarez, P., Inkelas, K. K., Rowan-Kenyon, H., & Longerbeam, S. (2007). Examining sense of belonging among first-year undergraduates from different racial/ethnic groups. *Journal of College Student Development*, 48, 525-542.
- Kaplowitz, S. A., & Campo, S. (2004). Drinking, alcohol policy, and attitude toward a campus riot. *Journal of College Student Development*, 45(5), 501-516.
- Keeling, R. P. (1999). A new definition of college emerges: Everything that happens to...a (newly defined) student, in the context of a noisy visual 'datascape'. *NASPA Forum*, 20(5), 4-5.

- Kember, D., Lee, K. & Li, N. (2001). Cultivating a sense of belonging in part-time students. *International Journal of Lifelong Education*, 20(4), 326-341.
- Kemp, R. L. (2013). *Town and gown relations: A handbook of best practices*. R. L. Kemp (Ed.). Jefferson, NC: McFarland.
- Kittle, D. R. (2005). *Parent-child myth in university and community relations*. (Doctoral dissertation). Retrieved from ProQuest dissertations and theses. (UMI number: 3204741)
- Kodama, C. M. (2002). Marginality of transfer commuter students. *NASPA Journal*, 39(3), 233-250.
- Krause, K.D. (2007). Social involvement and commuter students: The first-year student voice. *Journal of The First-Year Experience & Students in Transition*, 19(1), 27-45.
- Kuh, G. D. (2003). What we're learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change: The Magazine of Higher Learning*, 35(2), 24-32. doi:10.1080/00091380309604090.
- Kuh, G.D., Gonyea, R.M., & Palmer, M. (2001). The disengaged commuter student: Fact or fiction? *Commuter Perspectives*, 27(1), 2-5.
- Martin, J., & Samels, J. E. (2013). Boston, Northeastern University, and other cities and schools are building "collegetowns". In R. L. Kemp (Ed.), *Town and gown relations: A handbook of best practices* (pp. 48-50). Jefferson, NC: McFarland. (Reprinted from *College town topics*, by the International Town and Gown Association, April 2006, Clemson, SC).
- Mayfield, L. (2001). Town and gown in America: Some historical and institutional issues of the engaged university. *Education for Health*, 14(2), 231-240.
- Martinez, M. L., Black, M. & Starr, R. H. (2002). Factorial structure of the perceived neighborhood scale (PNS): A test of longitudinal invariance. *Journal of Community Psychology*, 30(1), 23-43.
- Maestas, R., Vaquera, G. S., & Muñoz Zehr, L. (2007). Factors impacting sense of belonging at a Hispanic-serving institution. *Journal of Hispanic Higher Education*, 6(3), 237-256.
- McLaughlin, S. M. (2011). *The effects of community building programs on student neighborhoods adjoining the urban university campus*. (Doctoral dissertation). Retrieved from ProQuest dissertations and theses. (UMI number: 3477048)
- McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14, 6-23.

- Michigan State University (1999, April 29). *Alcohol Action Team: Final implementation report*. Retrieved from <https://www.msu.edu/~act/finrpt5.html>
- Michigan State University. (2014). *College life: East Lansing*. Retrieved from <http://collegelifeel.msu.edu>
- Michigan State University (2016, May 1). *MSU Facts*. Retrieved from <http://msu.edu/about/thisismsu/facts.html>
- Michigan State University (2017). *Sign Up to Live On Campus Fall 2017*. Retrieved from <http://liveon.msu.edu/feature/sign-live-campus-fall-2017>
- Moyen, E. (2006, June 8). Town-gown relations on trial. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/views/2006/06/08/moyen>
- Mullins Jr., R. L., & Gilderbloom, J. I. (2002). Urban revitalisation partnerships: Perceptions of the university's role in Louisville, Kentucky. *Local Environment: The International Journal of Justice and Sustainability*, 7(2), 163-176. doi:10.1080/13549830220136463
- Munro, M., Turok, I., & Livingston, M. (2009). Students in cities: A preliminary analysis of their patterns and effects. *Environment and Planning A*, 41, 1805-1825.
- National Center for Educational Statistics (2010). *Profile of undergraduate students, 2007-08*. Washington, DC: US Department of Education.
- National Survey of Student Engagement. (2013). *A fresh look at student engagement: Annual results 2013*. Bloomington, IN: Indiana University Center for Postsecondary Research.
- Nichols, D. (1990). *University-community relations: Living together effectively*. Springfield, IL: Thomas Books.
- Ohio State University (2014). *Neighborhood services and collaboration, Off-campus and commuter student engagement*. Retrieved from <http://offcampus.osu.edu/>
- O'Mara, M. P. (2012). Beyond town and gown: university economic engagement and the legacy of the urban crisis. *The Journal of Technology Transfer*, 37, 234-250.
- Ostrove, J., & Long, S. (2009). Social class and belonging: Implications for college adjustment. *The Review of Higher Education*, 30(4), 363-389.
- Ott, R. L., & Longnecker, M. (2001). *Statistical methods and data analysis*. Stamford, Connecticut: Thomson Learning.
- Pascarella, E. T. (2006). How college affects students: Ten directions for future research. *Journal of College Student Development*, 47(5), 508-520.

- Pascarella, E., Bohr, L., Nora, A., Zusman, B., Inman, P., & Desler, M. (1993). Cognitive impact of living on campus versus commuting to college. *Journal of College Student Development*, 34(3), 216-220.
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.
- Porter, M. & Grogan, P. (2013). Urban renewal. In R. L. Kemp (Ed.), *Town and gown relations: A handbook of best practices* (pp. 223-227). Jefferson, NC: McFarland. (Reprinted from *Leveraging colleges and universities for urban economic revitalization: An action agenda*, by the Initiative for a Competitive Inner City and CEO's for Cities, 2002, Boston, MA)
- Remler, D. K., & Van Ryzin, G. G. (2011). *Research methods in practice: Strategies for description and causation*. Thousand Oaks, CA: Sage Publications.
- Rhee, B. (2008). Institutional climate and student departure: A multinomial multilevel modeling approach. *The Review of Higher Education*, 31(2), 161-183.
- Roe Clark, M. (2006). Succeeding in the city: Challenges and best practices on urban commuter campuses. *About Campus*, 11(3), 2-8.
- Silverman S. C., Aliabadi, S. & Stiles, M. R. (2008). Meeting the needs of commuter, part-time, transfer and returning students. In S. R. Harper & S. J. Quaye (Eds.), *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations* (pp. 223-241). Florence, KY: Routledge.
- Stewart, S. S. & Rue, P. (1983). Commuter students: Definition and distribution. In S. S. Stewart (Ed.), *Commuter Students: Enhancing Their Educational Experiences* (New Directions for Student Services, No. 24, pp. 3-8). San Francisco, CA: Jossey-Bass.
- Strayhorn, T. L. (2008). Fittin' in: Do diverse interactions with peers affect sense of belonging for black men at predominantly White institutions? *NASPA Journal*, 45(4), 501-527.
- Strayhorn, T. L. (2012). *College students' sense of belonging: A key to educational success for all students*. New York, NY: Routledge.
- Sungu-Eryilmaz, Y. (2013). Evolving relations. In R. L. Kemp (Ed.), *Town and gown relations: A handbook of best practices* (pp. 7-9). Jefferson, NC: McFarland. (Reprinted from *Town-gown collaboration in land use: Policy focus report* by the Lincoln Institute of Land Policy, 2009, Cambridge, MA)
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Pearson Education.

- Thelin, J. R. (2004). *A history of American higher education*. Baltimore, MD: The Johns Hopkins University Press.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed). Chicago, IL: University of Chicago Press.
- Twohey, M. (2007, March 27). Students off-campus behavior to be targeted. *Journal Sentinel*. Retrieved at <http://www.jsonline.com/news/milwaukee/29470154.html>
- University of Colorado Boulder (2011). *Off-campus housing & neighborhood relations*. Retrieved from <http://offcampushousing.colorado.edu/>
- University of Florida (2013). *Off-campus life*. Retrieved from <http://www.offcampus.ufl.edu>
- Warfield, W. (1995). Town and gown: Forums for conflicts and consensus between universities and communities. *New Directions for Higher Education*, 92, 63-69.
- Whitson, B. (2013). Williamsburg and the College of William and Mary form joint neighborhood relations committee. In R. L. Kemp (Ed.), *Town and gown relations: A handbook of best practices* (pp. 219-222). Jefferson, NC: McFarland. (Reprinted from *William & Mary News*, by the College of William and Mary, July 6, 2011, Williamsburg, VA)
- Young, C. E. (2013). Gainesville and the University of Florida implement neighborhood action plan. In R. L. Kemp (Ed.), *Town and gown relations: A handbook of best practices* (pp. 84-93). Jefferson, NC: McFarland. (Reprinted from *College town topics*, by the International Town and Gown Association, September 18, 2002, Clemson, SC)