SENSE OF BELONGING: OUTCOMES FROM A RESIDENTIAL COMMONS MODEL

Sarah Huffines
Covenant College

Whitney Platzer O'Regan
NASPA - Student Affairs Administrators in Higher Education

Elizabeth Soto
Dominican University

Abstract

This mixed methodological study examines the relationship between participation in a residential commons system and sense of belonging in the context of an elite, highly residential liberal arts institution. Students of color, students from lower socioeconomic backgrounds, and students who do not participate in Greek letter organizations reported a lower sense of belonging than their peers. Qualitative findings reveal that participation in a residential commons system did not positively contribute to sense of belonging, and quantitative findings reveal a negative relationship between commons participation and sense of belonging.

Keywords: sense of belonging, residential commons, living-learning communities

In the public imagination, residential colleges disproportionately represent popular conceptions of elite university life. The trappings of a residential college are rooted in an Ivy League tradition (Yanni, 2019) and can be used to signal prestige, but they also serve a function. Residential colleges seek to reinforce a shared sense of community through living spaces often characterized by residential, dining, and programming spaces with high-touch faculty involvement (Brown et al., 2019; Yanni, 2019), and many liberal arts colleges have invested in a residential college model for the perceived social and academic benefits of their students (Mayhew et al., 2016; Pike et al., 2011). The communities within these colleges can be called residential colleges, houses, residential learning communities, or residential commons, depending on institutional emphasis. Because this study emphasizes common spaces as a feature of the communities, the term "residential commons system" will be used whenever appropriate. These smaller communities within the larger universities exist to foster within students a sense of belonging through the built environment and shared identity.

Student sense of belonging, which is students' "perceived social support on campus," their feelings of connectedness, and "their experience of mattering or feeling cared about, accepted, respected, valued by, and important to the group" (Strayhorn, 2019, p. 4) is an essential element for student well being. This sense of belonging is especially important to intentionally foster in student groups who may be marginalized in highly selective or wealthy college contexts, such as students of color or those from lower socioeconomic backgrounds. However, despite significant investments in residential commons systems across institutions, very few studies have examined their effect on student belonging, particularly within an elite, liberal arts context.

Using data from one elite, private, liberal arts institution in the northeast United States, this explanatory sequential mixed methodological study was guided by a desire to understand the relationship between a residential commons system and student sense of belonging. Using Strayhorn's (2019) definition of sense of belonging as a theoretical framework, this study asks three related questions:

- To what extent is participation in the residential commons system associated with sense of belonging?
- Is the association of participation in the residential commons system and sense of belonging different for different student demographics, such as race, socioeconomic status, Greek letter organization participation, and student athlete status?
- In what ways does the residential commons system contribute or not contribute to a sense of belonging?

Literature Review

In order to investigate the relationship between sense of belonging and a residential commons system, it is important to understand the components of sense of belonging, how different groups might experience sense of belonging, and how the residential environment may impact student belonging.

Sense of Belonging

Although a review of the existing literature provides varied meanings of sense of belonging (Hoffman et al., 2002; Johnson et al., 2007; Strayhorn, 2019), the different definitions overlap significantly. According to Hoffman et al. (2002), sense of belonging reflects students' integration into the college system and is measured through students' perceptions of peer support, faculty support, classroom comfort, levels of isolation, and faculty understanding. Johnson et al. (2007) operationalize student sense of belonging through the students' perceptions of campus community, comfort, and supportiveness, along with a felt sense of belonging and a satisfaction with their choice of college.

In his description of sense of belonging, Strayhorn (2019) incorporates Maslow's hierarchy of needs (1962). Strayhorn (2019) defines sense of belonging as "students' perceived social support on campus, 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. 4). Strayhorn's work emphasizes the importance of sense of belonging for underrepresented students who may perceive themselves as marginal in terms of campus life. Strayhorn (2019) specifically lists seven core elements, saying that sense of belonging is (1) a basic and universal need, (2) a driver of human behavior, (3) of heightened importance in different contexts, (4) a consequence of mattering, (5) affected by social identities, (6) influential on other desired outcomes, and (7) important to continually satisfy.

While Strayhorn's definition stresses the importance of sense of belonging as an inherent good, student sense of belonging also potentially affects other important student outcomes. Goapalan and Brady (2019) highlighted the need to better measure belonging and related psychological factors to identify what may encourage college students' success and well-being as sense of belonging is positively associated with engagement and mental health. Additionally, Hausmann et al. (2007) found a positive relationship between the quality of peer interactions and sense of belonging, as well as a positive relationship between sense of belonging and retention. Finally, several studies have highlighted the potential for sense of belonging to positively influence intent to persist (Hausmann et al., 2007; Spanierman et al., 2013).

A number of studies investigating the relationship between race/ethnicity and sense of belonging have found consistent results. Surveys conducted at four-year, primarily white institutions show that African American and Hispanic students report a lower sense of belonging on campus than their white counterparts (Johnson et al., 2013; Spanierman et al., 2013). This gap in sense of belonging is commonly attributed to the racial climate at such institutions (Johnson et al., 2013), and specific elements of that racial climate might include discrimination, social isolation, microaggressions, and marginalization (Strayhorn, 2019). The relationship between race and sense of belonging should not be oversimplified, however. Notably, students of color and first-generation students report a higher sense of belonging at two-year colleges than their peers at four-year institutions (Gopalan & Brady, 2019). Additionally, a study in the Netherlands found that the interrelationships between teacher and peer interactions, sense of belonging, and academic success are different for ethnic minority students, for whom formal relationships with teachers and students mattered more than for their majority counterparts (Meeuwise et al., 2010).

Like race, socioeconomic status can influence a student's sense of belonging. A number of studies have found that students from lower socioeconomic backgrounds report a lower sense of belonging (Garvey et al., 2020; Martin, 2015a; Martin, 2015b; Nguyen & Herron, 2020) and often report having less social capital (Storia & Stebleton, 2013). Such students may feel as though they should not be spending time on any activities other than work or academics (Martin, 2015a), are less likely to ask for help (Martin et al., 2018), are conscious of material differences (Martin, 2015b), often lack the college knowledge about available programs and services (Ardoin, 2018), and are unable to spend the money often needed for building relationships (Nguyen & Herron, 2020). Some institutions have used living-learning communities to address sense of belonging among these students, often using first generation status as a proxy for socioeconomic status (Ardoin, 2018).

Just as student identity and backgrounds can influence sense of belonging, so too can membership in social organizations. In American institutions, and in elite institutions in particular, Greek letter organizations (GLOs) can play a prominent

role in the social fabric of some students' lives. In a study comparing first-year students and seniors in GLOs, Ansel et al. (2009) found that GLOs did "tend to facilitate social integration and enhance the development of close and influential relationships" (p. 6). Walker et al. (2015) found that GLO membership at an elite, private university predicted a greater satisfaction with social lives, even after accounting for selection effects. Hurtado and Carter (1997) also found that Latino students associated culturally based GLOs with feelings of belonging. In a survey of self-reported gains of fraternity and sorority members, Long (2012) reported that, overall, respondents described their experiences as "excellent" in encouraging a sense of belonging. Those feelings of belonging can come at a cost, however. From their founding, exclusivity has been a part of GLOs (Barber et al., 2015; Yanni, 2019), and those in GLOs are slightly more likely to have homogenous social circles than those who are not (Antonio, 2001).

The Residential Environment

Much of the foundational literature on the effects of residential life on student outcomes has centered around a simple binary—those living on campus and those not—but there are important distinctions to be made between types of residence halls and their use to influence student outcomes. When it comes to the built environment, differences matter. As Brown et al. (2019) write, "architectural design chosen by the university influences the opportunities for students to establish relationships," and those relationships in turn influence students' academic achievements (p. 271). Most of the literature around the built environment of residence halls explores the potential effects of common space for students. While many students may prefer apartment-style dorms, with larger individual suites and fewer communal living spaces, those who live in such dwellings report significantly lower senses of community than those living in traditional dorms with shared corridors and communal spaces (Devlin et al., 2008). Chambliss

and Tackas (2014) argue that shared corridors and communal spaces encourage student social interactions, and Brown et al. (2019) found that those students who live in shared corridor-style spaces had slightly higher first-semester GPAs. Students who felt their residence hall was socially supportive were found to have a greater sense of belonging than those who did not (Johnson et al., 2007). On the other hand, Bronkema and Bowman (2017) found that residence hall design was not significantly related to outcomes such as community, satisfaction, or academic achievement.

In addition to communal spaces, identity may be another important piece of the potential effect of residential colleges. Within the context of a large university, giving students a smaller group to be affiliated with can be helpful, and, as Yanni (2019) describes, can promote "loyalty to the group, as once students held loyalty to their class years" (p. 143). The formation of this smaller group, she argues, can be considered "more important than any specific type of building, quadrangular or otherwise" (p. 143). As an important dimension of community in residence halls, identity can influence how much students choose to invest in community (Braxton et al., 2014). Identity can be developed through things like programming, hall symbols, or hall competitions (Erb et al., 2015). Finally, residential colleges can have the effect of bringing students into the larger identity of the university, acclimating students to the social and academic conventions of college life (Yanni, 2019).

Finally, residential communities organized around academics—living-learning communities (LLCs)—may have a positive effect on sense of belonging. Traditionally defined as a community of students who take two or more classes together while living together (Zhao & Kuh, 2004), multiple studies have examined the academic effects of LLCs. However, when it comes to the social effects of LLCs, students involved in these communities have reported significantly higher levels of sense of belonging in their residence halls than non-LLC students (Spanierman, 2013). More specifically,

LLC students revealed that feeling a part of the residence hall community helped students feel part of the larger campus community (Spanierman, 2013). Living learning communities are associated with increased college satisfaction (Baker & Pomerantz, 2000) and can lead to higher-quality connections between faculty and students (Arensdorf & Naylor-Tincknell, 2016). Additionally, the learning community model has been shown to be associated with more peer interactions and a greater sense of belonging (Hoffman et al., 2002). Overall, research has found that learning communities provide opportunities for meaningful student engagement (Mayhew et al., 2016) and are also positively linked to student engagement (Pike et al., 2011).

Methods

Design

This study used an explanatory, sequential mixed-methods design (Cresswell & Plano Clark, 2011) so that the relationships among key variables could first be understood quantitatively and then explored in more depth qualitatively. In other words, this study started, sequentially, with a quantitative analysis to understand the relationships between sense of belonging, commons affiliation, and student characteristics. Once those relationships were established, qualitative interviews were conducted in order to primarily explain, but also to triangulate and provide context for the quantitative findings (Bryman, 2006).

Setting and Context

This study was conducted at a small, private, highly selective, liberal arts institution in the northeast United States, pseudonymously referred to here as Model University. The first-year students share the commons with the classmates of their first-year experience courses, and there are faculty directors for each commons. Socially, programming and activities are provided within each commons, and even when upper-level stu-

dents no longer live in the primary residence halls of the commons, they maintain their affiliation throughout their Model University experience. The implementation of the commons was done incrementally over five years, and by Fall 2020, 100% of the study body was affiliated with one of four residential commons.

Quantitative Data and Measures

Data Sets and Sample

For this study, it was essential to compare those within the residential commons system with those not in the residential commons system. Therefore, our primary evaluations were limited to the years 2014-2017, when the commons were partially implemented, though in some analyses, years outside that range were evaluated for additional context. We used The National Survey of Student Engagement (NSSE), published by the Center for Postsecondary Research at the Indiana University School of Education; and Your First College Year Survey (YFCY), distributed by the Higher Education Research Institute at The University of California, Los Angeles. To these data sets, we were able to add institutional, student-level data on commons affiliation, eventual GLO participation, athletic status, and socioeconomic status.

For the student survey data, all eligible students were invited to participate, and response rates ranged between 13% and 29%. As can be seen in Table 1, female students and those affiliated with the commons are overrepresented in the sample populations for NSSE and YFCY. Athletes were underrepresented in NSSE and YFCY. It is difficult to know the racial representativeness of the sample population because student surveys include international students, but Model's institutional numbers do not. It is worth noting that, although the combined data for YFCY 2016 and 2017 has an unusually high number of students not affiliated with the commons, this is because it includes data from spring of 2016 when a much smaller portion of the first-year students were in

the commons. The data from 2017 alone show a closer-to-expected 70% of students affiliated with the commons.

Variables

Student characteristics of interest were commons affiliation, eventual participation in a GLO, student athletic status, and socioeconomic status (SES). Given institutional data available to us, low SES was defined through a student's eligibility for Model's no-loan initiative. Although the income cut off for that no-loan initiative is higher than traditional measures of low income, with families roughly in the bottom 90% of income earners nationally qualifying, given the income profile of Model, it does capture those students who are well below the school's median family income.

In order to describe students' sense of belonging, we started by creating scales using existing survey items on the NSSE and YFCY that corresponded to Strayhorn's (2019) definition of sense of belonging. Once relevant questions were identified, we used STATA to calculate reliability using Cronbach's Alpha for the set and dropped the questions that brought down overall reliability. The resulting alpha reliabilities for the sense of belonging scales were 0.8 for the 10-question NSSE scale and 0.9 for the 5-question YFCY scale. When constructing the scales, we also standardized each variable, rather than using the original scale of the survey instrument. The final set of questions included questions asking students how much their institutions emphasized both academic and non-academic support, how easy it was for them to develop friendships, the quality of their interactions with others, how much they felt valued by the community, how much they felt a sense of belonging, and how much they identified as a member of the community.

Statistical Analysis

The data sets were imported into STATA to conduct the statistical analysis. Based on how Model University collects and categorizes data,

some variables, such as sex, commons affiliation, low SES, and Greek life status, were coded as binary variables in the process. Statistical analyses were conducted to explore potential relationships between variables by conducting linear regressions, independent sample t-tests, and linear regressions with interactions. Because the analyses varied between research questions, details will be given along with the results.

Qualitative Data

The qualitative methods of this study expand on the quantitative methods by highlighting how both students and staff experience sense of belonging and interactions with the residential commons on campus. With the aim of specifically addressing the sense of belonging within the residential commons system, interviewers followed a semi-structured interview protocol addressing sense of belonging and the experiences of those from varying socioeconomic backgrounds.

Sampling

Model University provided the research team access to a randomized sample of 248 undergraduate students. These students were a random sample, in which the Office of Institutional Research oversampled students identified as Hispanic, Black, and low-SES to balance representation of the undergraduate student body. Emails requesting participation in focus groups resulted in 18 (7%) student sign-ups, with 7 (38%) participating in 1-hour focus groups. Student interviews were in a focus group format, over video conferencing. In addition, researchers facilitated a focus group within a student organization meeting of 11 students. Demographics of the students who participated in the focus groups include male students (N=1), female students (N=16), non-binary (N=1), Black students (N=2), Hispanic/Latino students (N=4), white (N=12), and a student who identified as multiracial (N=1). 43% of the students who participated qualified for the institutional no-loan initiative, and all but one (86%) lived in a residen-

tial common as a first-year student. In this sample, students were involved on campus through their roles as student athletes (N=2), in a GLO (N=11), in a culture-based (N=4) or spiritual organization (N=1), or serving as a resident assistant (N=1). To complement the student experience, a range of staff and faculty were interviewed. The purposive sample was collected by first tapping the shoulders of the Senior Student Affairs Officer and second through following recommendations that came out from the first round of interviews. While demographic data of this sample was not collected, professional roles were. The sample included student life staff (N=4), residential life staff (N=5), faculty (N=2), and institutional leadership (N=2).

Interviews and Analysis

Qualitative data was collected by conducting interviews over Zoom, and responses were recorded with written notes and voice-to-text software. The research team guaranteed anonymity and ensured student subjects consented to the interview and recording before the interview began. All subjects were provided with an option to opt out of the voluntary interview. A semi-structured guided interview protocol was used to facilitate interviews. The protocol was guided by the conceptual framework and the research questions. Questions were asked about sense of belonging, experiences influenced by socioeconomic status, and the residential commons system. Students were asked questions such as: What are some words that come to mind when you think about sense of belonging on campus; do you feel like you've had an equal chance to belong; and did the residential commons help you find community? If so, how? Staff were asked questions such as: In what ways does your role on campus contribute to creating a sense of belonging for students, what ways do students find community here, and in what ways have you seen the residential commons system influence the student community? The semi-structured format allowed for follow up questions to the initial open-ended

questions. Transcripts of the interviews were analyzed holistically using concept cluster matrices. Themes were then defined and confirmed through triangulation and plausible relationships to quantitative results.

Researcher Positionality

The first two authors of this study identify as white women with college-educated parents, while the third author identifies as a first-generation Latina. One of the authors is a faculty member while the other two come from a student affairs background. We acknowledge that this positionality may have influenced this project, and the researchers made every effort to check their own biases, particularly when handling matters of socioeconomic status.

Results

The results of our quantitative research show that commons affiliation is associated with a lower sense of belonging and that the experience of the commons is not differentially felt among different student groups, despite the fact that overall feelings of belonging do differ between student groups. Race and Greek letter organization participation predict sense of belonging, but there is no indication that the commons help mitigate that effect, despite their intent. In the qualitative findings, students do not report finding identity or belonging in the commons, though they sometimes find that belonging elsewhere on campus. The following section describes these findings in more detail.

Lower Sense of Belonging in the Commons

We conducted independent sample t-tests, comparing the overall sense of belonging for first-year students within the commons with the overall sense of belonging for first-year students not in the commons. In the 2017 NSSE data set, there was a statistically significant and moderate relationship between the sense of belonging scale and

commons affiliation. Those in the commons had a lower sense of belonging. The effect is moderate, at 0.3 standard deviations, and it is statistically significant with p<0.01. This relationship was confirmed using both YFCY 2016 and 2017 data. Within YFCY, the results of the t-test showed that the effect was moderate at 0.28 standard deviations, and statistically significant at p<0.05.

Following this finding, linear regressions were conducted to determine if any expected variables might predict commons involvement. In both the NSSE and YFCY data sets, looking at sex, eventual GLO participation, athletic status, SES, first-generation college student status, international student status, race, grades, GPA, and sexual orientation status showed no statistically significant relationship between those variables and commons affiliation, with one exception: in the YFCY data set, those who would eventually join a GLO were slightly less likely to be in the commons (Coef.-.16, p<.05). These findings are meaningful because if the population of those in the commons had been significantly different from those not in the commons, then self-selection bias would be more likely.

Student Demographics and Sense of Belonging

Given the previous findings and the desire for the commons to serve students who may need help finding sense of belonging, we conducted a linear regression with interactions to consider the relationship between commons affiliation and sense of belonging for different groups of freshmen. Significantly, in one data set, those who identified as Black (Coef.-.86, p<.01) or Hispanic (Coef.-.45, p<.05) reported a meaningfully lower sense of belonging overall, while those who would go on to join a GLO (Coef. .47, p<.001) reported a higher sense of belonging. However, we found no statistically significant, observable interaction between commons affiliation and sense of belonging based on race, income status, athletic status, or eventual Greek letter organization participation status.

These results were consistent for both the NSSE 2017 data set and the YFCY 2016 and 2017 data set.

This lack of an observable interaction is meaningful because these residential commons exist primarily to provide a community for those who may need it, including those who may have a harder time finding belonging at an elite institution: students of color, students from low SES backgrounds, students who are not athletes, or students who do not join GLOs. The lack of interaction, coupled with the negative relationship found between commons affiliation and sense of belonging generally, calls into question the efficacy of the residential commons model.

Belonging Outside of the Commons

The qualitative interviews with students and staff provided the chance to further explore the relationship between the residential commons and sense of belonging. These findings provided the context both for how different student groups felt a lower sense of belonging and for where belonging was found on campus. They also triangulated the quantitative findings by corroborating the conclusion that the commons were not fulfilling their purpose of increasing student sense of belonging and explained why students might not be finding belonging in the commons.

Differences in Sense of Belonging

Students of color shared that their experiences of finding belonging were limited. Iris (sophomore) shared that her white peers, "have a chronic unwillingness to put themselves outside of their own ways. They can't fathom to think about people who might have different identities than them or might be from a different, like, socioeconomic status than them." Sadie (freshman) highlighted a similar struggle in the classroom, admitting that when she tried to discuss issues of diversity and equity, students and even some faculty "kind of get a little angry at me...it makes it so that kids like me are nervous to speak up in class and feel

uncomfortable." Jasmine (sophomore) described having to mentally prepare herself before entering "a predominantly white space. And I know that not everybody in that space is going to view me in a positive light."

The awareness of socioeconomic status manifests itself in a variety of ways, and several students shared their specific experiences at Model. Some students spoke about balancing work and socializing to prioritize their budget. Others, such as Jennifer (junior), described experiences missed because of a lack of financial resources. Specifically, she shared about missing a national rugby tournament being held overseas: "so when [the teammates] came back they were talking about it and I was like, I don't know what you're talking about, I didn't go."

On the other hand, the physical structures and selection process for GLOs provide an environment that fosters community and belonging. For those who elect to participate, as Lauren (senior) shares, the return through increased social capital is substantial: "you really increase your network …you're always gonna have a friend around … there's something really special … having shared experiences and shared values." However, several students agreed their opportunities to build a connection with peers are limited outside of GLOs. Jennifer (junior) recalls GLO participation and parties dominated the social scene: "the only social (gatherings) that were really prominent… [were] parties and Greek life stuff like that… it was really hard to find something that wasn't."

Identity, Space, and Belonging

When students were asked to share where they receive the most support and whether they feel they have opportunities to be themselves while attending Model, they often spoke first of their initial shock of feeling different on campus and then spoke about the process of finding a place where they could belong.. For some students, staff at Model were able to direct them to find community and connect with others who had similar

backgrounds. For example, Sadie (freshman) expressed challenges with attending a predominantly white institution (PWI):

> So it was very kind of shocking for me to come to Model, given that it was a PWI… so when I started talking to one of my advisors about it, she recommended that I join a culturally based organization so I could talk to, you know, upper-class students or students that are in the same grade level as me, that also kind of resonates with those backgrounds, so you know, women in STEM or women of color.

Iris (sophomore) shared that people at Model are unwilling to take themselves outside of their own ways and accept that some people might have different identities and socioeconomic statuses. She shared that she has two jobs, and that is something that the students she encounters at Model cannot relate to. Iris appreciated having spaces like the cultural center to lean on:

> People have said racial things, like you know it's just like that stuff happens a lot here. And I think that's why spaces like the cultural center are so important because it is like a getaway from that experience, like you're walking into a space that is for you. And that's something that, like, the commons isn't.

The theme of a physical space for smaller groups of students was prominent. The cultural center on campus has a large lounge where students are able to do many things, such as take a nap and know that it is a "no judgment space" where everybody is welcomed. Additionally, GLOs have physical spaces that come with the privilege of being able to build community more easily due to having spaces to socialize, which in turn create an exclusive community. Student life staff who work with GLOs acknowledged this saying that it created "an us versus them situation."

A Lack of Connection to the Commons

As students reflected on their experiences with the residential commons, some common

themes emerged. Students acknowledged that they were part of a commons, but they lacked an understanding that the commons were more than just a first-year residential experience. A common thread was the lack of recognition that the commons experience is something other than a grouping of physical structures. For example, Jared (junior) shared that, "I just understood it as like, okay, these three buildings were part of the same community, we can have access to get in there. That's pretty much all I really understood about it." This lack of connection with their respective commons was further exacerbated as students moved away from central campus as upper-class students. Several students described not just an ambivalence with their commons in their first two years in college, but a particular disconnection as upperclassmen. As Jared (junior) told us, "Now as a junior, you don't really feel the commons as much."

A lack of clarity and meaningfulness around the programming of the commons also likely contribute to this disconnection from the commons. Tina (sophomore), when reflecting on social opportunities within her commons, was unsure of whether she had been attending commons events: I've been doing a few of the residential commons [events]… or maybe they're not residential commons events. Just little, like, events that our RA on our floor sets up that kind of thing." Additionally, one staff member noted,

> "I think that you flock to the identity that you feel gives you the most value. And I don't think that our commons identity is giving them social capital, I don't think it's giving them the cool factor. I don't think it's actually bringing them to any, like, great programming or life-changing experiences or opportunities.

The qualitative interviews provided insight as to why students may not feel a sense of belonging on campus and the disconnection with the residential commons. The experiences of minority students and those from low SES backgrounds

affirm the need to intentionally cultivate sense of belonging for all, but the commons did not provide that sense of belonging. Rather, there was little understanding of the purpose of the commons and very little identification with them for the purposes of building community.

Discussion and Implications

Despite the purpose of the residential commons system to provide belonging for those who may need it most, this study found that those in the commons system reported a lower sense of belonging. While Black and Hispanic students, as well as those who were not part of a Greek letter organization, reported a lower sense of belonging overall, participation in the commons did not interact with that relationship in any meaningful way. Students largely reported that the commons did not hold significance for them; rather they often found belonging in groups centered around identity.

These findings both confirm and complicate findings of previous studies. Overall, the findings related to student groups of interest, and their sense of belonging fit what was expected, given the literature. In the qualitative interviews, students of color reported lower senses of belonging, and in one of the quantitative data sets, both Black and Hispanic students reported a lower sense of belonging. These results confirm the findings of Johnson et al. (2007) and Spanierman et al. (2013), which all found lower belonging in students of color. Although no observable relationship could be found between students from low SES backgrounds and sense of belonging in the quantitative results, in the interviews, students from lower SES backgrounds did describe difficulties in finding community at Model University. This confirms the findings of a number of studies, including Ardoin (2018), Garvey et al. (2020), Martin (2015a), Martin (2015b), Martin et al. (2018), Nguyen and Herron (2020), and Soria and Stebleton (2013). The finding that those who eventually joined Greek letter organi-

zations felt a higher sense of belonging fits with what is generally known about such organizations, though the fact that this belonging was felt before students joined any GLOs suggests that some selection characteristics may be at play, as Walker et al. (2015) suggest.

When it comes to the relationship between sense of belonging and the residential commons, the findings of this study do not fit what might be broadly expected given the literature. Because residential commons are designed to promote a sense of belonging and because these particular commons are self-described as a living learning community, which are often linked to higher belonging (Spanierman et al., 2013), it was expected that these residential commons would also have a positive relationship with sense of belonging, but they did not. As discussed below, this finding is a reminder that implementation matters. As Johnson et al. (2007) report, students' perception of supportiveness has an impact on students' belonging, regardless of what the residence halls structure may be called. The qualitative findings surrounding common space also echo the importance of implementation and confirm much of the findings of the importance of commons space (Brown et al., 2019; Chambless & Tackas, 2014; Devlin et al., 2008). Without intentional community space available to juniors and seniors in the context of the commons, upper-class students struggled to maintain community and affiliation once they moved out of the buildings.

The qualitative data collected confirms, at the very least, that the commons may not be contributing positively to students' sense of belonging. This is a critical finding to consider as institutions of higher education seek to implement programs that further a mission of belonging, engagement, and development. Although staff and faculty involved in the commons' formation spoke of its purpose of providing community, most of the students interviewed did not identify the commons as a source of community. Instead, when they spoke about finding community, they spoke about finding it in

other groups, either groups centered around identity or GLOs. None of the students interviewed had any animosity towards their commons, just indifference. These findings highlight that while our intent as practitioners may be mission-driven, consistent and effective program evaluation, inclusive of students' lived experiences, is crucial to growth and modernization.

Implications for Practice and Future Research

The findings of this study show that, for institutions looking to foster sense of belonging through residential interventions, implementation matters. The need for such interventions is confirmed and consistent: Black students, Hispanic students, and those not participating in GLOs report a lower sense of belonging. However, despite significant investments in its residential commons system, Model University did not move the needle on sense of belonging for these students. The findings, particularly the qualitative findings, point to a few implications. First, institutional interventions for sense of belonging are needed. Second, such interventions need to extend beyond the freshman year. Institutions can leverage common spaces for sense of belonging, but residential commons systems need more obvious value for sophomores and upperclassmen. Finally, because students find belonging in organizations centered around identity, residential commons systems looking to increase student sense of belonging should find ways to tap into and leverage student identity. Future research could focus on the evaluation of how different residential commons implement their programming.

Limitations

These findings should be interpreted within the context of several limitations. First is the representativeness of the samples, in both the quantitative and the qualitative data, with some likely self-selection bias for those who responded to the request to fill out the surveys. While this is definitely a concern to take seriously, because results

were compared to other results within the same survey, self-selection bias is at work for those who were a part of the commons and those who were not a part of the commons. If dissatisfaction was a motivation for filling out a survey, then that would be equally true for those in the commons and those not in the commons, especially since none of the surveys were directly about the commons. Further, within the data collection tools, quantitative data was collected on sex as opposed to gender. In the qualitative data, gender was not collected or analyzed as a variable. As part of the student interview protocol, a question about gender was included with inclusive options to answer (Male, Female, Non-binary, and prefer not to answer). Second, representativeness is also a limitation in the qualitative data, with self-selection bias affecting those students who chose to respond to our request for an interview. Third, another significant limitation of this study is the nature of selection into the residential commons for the years studied. During those years, students were not randomly assigned to the commons but rather had to indicate a willingness to be placed into them. Fourth, while the quantitative data was from 2016 and 2017, all of the qualitative data was gathered during the fall of 2020 and the spring of 2021. While interviewers followed a semi-structured interview protocol, due to time constraints which resulted in limited access to the sample population, the protocol was not tested before it was utilized. Conducting interviews over Zoom likely affected transparency, and access to staff was affected by unusually heavy workloads involving the housing and care for students in quarantine or the management of hybrid events. Staff who were relatively new to Model, which were quite a few, had never experienced the university without social distancing restrictions. Additionally, the immediacy and overwhelming nature of the pandemic experience likely affected not only students' and staff's perceptions of their experiences but also their willingness to participate in follow-up data gathering.

Conclusion

Understanding the links between residence hall spaces, programming, and social networks is essential to understanding sense of belonging in an undergraduate, residential community. Our results show that participation in the residential commons is either not observably associated with sense of belonging or not associated with the desired direction. However, the fact that students of color, those from a low SES background and those who do not join GLOs experience belonging in college differently means that the opportunity for a common system to provide belonging should be explored. This is especially true because sense of belonging plays a role in many of the important outcomes of college: intent to persist, psychological well-being, and academic performance.

References

Ansel, A. M., Seifert, T. A., & Pascarella, E. T. (2009). The effects of fraternity/ sorority membership on college experiences and outcomes: A portrait of complexity. *Oracle: The Research Journal of the Association of Fraternity/ Sorority Advisors, 4*(2), 1-15.

Antonio, A. (2001). Diversity and the influence of friendship groups in college. *Review of Higher Education, 25*(1), 63-89.

Ardoin, S. (2018). Helping poor- and working-class students create their own sense of belonging. New directions for student services, 2018(162), 75-86.

Barber, J. P., Espino, M. M., & Bureau, D. (2015). Fraternities and sororities: Developing a compelling case for relevance in higher education. In P. A. Sasso & J. L. DeVitis (Eds.), *Today's college students: A reader* (pp. 241-256). Peter Lang.

Bell, R., Wechsler, H., & Johnston, L. D. (1997). Correlates of College Student Marijuana Use: Results of a U.S. National Survey. *Addiction 92*(5): 571-581.

Blimling, G. S. (1999). A meta-analysis of the influence of college residence halls on academic performance. *Journal of College Student Development, 40*(5), 551–561.

Braxton, J., Doyle, W., Hartley, H., Hirschy, A., Jones, W., & McLendon, M. (2014). *Rethinking college student retention*. Jossey-Bass.

Bronkema, R., & Bowman, N. (2017). A residential paradox?: Residence hall attributes and college student outcomes. *Journal of College Student Devel-*

opment, 58(4), 624–630. https://doi.org/10.1353/csd.2017.0047

Brown, J., Volk, F., & Spratto, E. M. (2019). The hidden structure: The influence of residence hall design on academic outcomes. *Journal of Student Affairs Research and Practice, 56*(3), 267-283, https://doi.org/10.1080/19496591.2019.1611590

Bryman, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative Research, 6*(1), 91-113.

Chambliss, D. F., & Takacs, C. G. (2014). *How college works*. Harvard University Press.

Cresswell, J. & Plano Clark, V. (2011). *Designing and conducting mixed methods research*. SAGE Publications, Inc.

Devlin, A. S., Donovan, S., Nicolov, A., Nold, O., & Zandan, G. (2008). Residence hall architecture and sense of community: Everything old is new again. *Environment and Behavior, 40*(4). 487-521.

Erb, N. M., Sinclair, M. S., & Braxton, J. M. (2015). Fostering a sense of community in residence halls: A role for housing and residential professionals in increasing college student persistence. *Strategic Enrollment Management Quarterly, 3*(2), 84-108.

Garvey, J. C., Ballysingh, T. A., Dow, L. B., Howard, B. L., Ingram, A. N., & Carlson, M. (2020). Where I sleep: The relationship with residential environments and first-generation student belongingness. *College Student Affairs Journal, 38*(1), 16-33.

Gopalan, M., & Brady, S. (2019). College students' sense of belonging: A national perspective. *Educational Researcher, 49*(2), 134–137. https://doi.org/10.3102/0013189x19897622

Hausmann, L. R., Schofield, 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.

Hoffman, M., Richmond, J., Morrow, J., & Salomone, K. (2002). Investigating "sense of belonging" in first-year college students. *Journal of College Student Retention: Research, Theory & Practice, 4*(3), 227-256.

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*, 324-345.

Johnson, D. R., Soldner, M., Leonard, J. B., Alvarez, P., Inkelas, K. K., Rowan-Kenyon, H. T., & Longerbeam, S. D. (2007). Examining sense of belonging among first-year undergraduates from different racial/ethnic groups. *Journal of College Student Development, 48*(5), 525-542.

Long, L. D. (2012). Unchallenged, professed core values: Do undergraduate fraternity/ sorority members actually benefit in the areas of scholarship, leadership, service, and friendship? *College Student Affairs Journal, 30*(2), 15-30.

Martin, G. L. (2015a). "Always in my face": An exploration of social class consciousness, salience, and values. *Journal of College Student Development, 56*(5), 471-487.

Martin, G. L. (2015b). "Tightly wound rubber bands": Exploring the college experiences of low-income, first-generation White students. *Journal of Student Affairs Research and Practice, 52*(3). 275-286.

Martin, G. L., Williams, B., & Reynolds Young, C. (2018). Understanding social class as identity. *New directions for student services*, 2018(162), 9-18.

Maslow, A. H. (1962). Toward a psychology of being. VanNostrand.

Mayhew, M. J., Rockenbach, A. N., Bowman, N. A., Seifert, T. A., & Wolniak, G. C. (2016). *How college affects students: 21st century evidence that higher education works*. John Wiley & Sons.

Meeuwisse, M., Severiens, S., & Born, M. (2010). Learning environment, interaction, sense of belonging and study success in ethnically diverse student groups. *Research in Higher Education, 51*(6), 528–545. https://doi.org/10.1007/s11162-010-9168-1

Model University (2019). *Strategic Plan*. Model University. https://www.model.edu/about/strategic-plan

Nguyen, D. J., & Herron, A. (2021). Keeping up with the Joneses or feeling priced out?: Exploring how low-income students' financial position shapes sense of belonging. *Journal of Diversity in Higher Education, 14*(3), 429.

Pike, G. R., Kuh, G. D., & McCormick, A. C. (2011). An investigation of the contingent relationships between learning community participation and student engagement. *Research in Higher Education, 52*(3), 300-322.

Soria, K. M., & Stebleton, M. J. (2013). Social capital, academic engagement, and sense of belonging among working-class college students. *College Student Affairs Journal, 31*(2), 139.

Spanierman, L., Soble, J., Mayfield, J., Neville, H., Aber, M., Khuri, L., & De La Rosa, B. (2013). Living learning communities and students' sense of community and belonging. *Journal of Student Affairs Research and Practice, 50*(3), 308–325. https://doi.org/10.1515/jsarp-2013-0022

Strayhorn, T. L. (2019). *College students' sense of belonging: A key to educational success for all students*. Routledge.

Walker, J. K., Martin, N. D., & Hussey, A. (2015). Greek organization membership and collegiate outcomes at an elite, private university. *Research in Higher Education, 56*(3), 203-227.

Yanni, C. (2019). *Living on campus: An architectural history of the American dormitory*. Minneapolis. University of Minnesota Press.

Zhao, C. M., & Kuh, G. D. (2004). Adding value: Learning communities and student engagement. *Research in Higher Education. 45*(2), 115-118.

Table 1
Sample Characteristics

Sample Characteristics	NSSE 2017 Freshmen Only	YFCY 2016 + 2017	2017 Freshman Class
Sex			
Male	28.64%	34.45%	43.3%
Female	71.36%	65.55%	56.7%
Race*			
White	71.07%	69.92%	66.3%
Black	4.40%	5.91%	4.6%
Hispanic	5.03%	8.44%	7.6%
Asian	9.43%	13.92%	3.9%
Multiracial or Other	10.07%	2.11%	8.1%
Commons affiliated	64.09%	35.69%	55%
Athlete	15.91%	15.29%	23.6%
Low SES	25.45%	31.76%	--
Eventual GLO participant	31.82%	35.69%	33.7%

Table 2

Independent sample t test, Sense of Belonging Scale

	Not in Commons	In Commons	t	n
NSSE	.35**	.04**	3	165
	(.57)	(.62)		
YFCY	.1*	-.18*	2.3	230
	(.84)	(.86)		

*Note: *p<.05, **p<.01, ***p<.001. Standard deviations are reported in parentheses under means.*