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ON-CAMPUS LIVING: A QUANTITATIVE EXPLORATION OF ENGAGEMENT IN
COEDUCATIONAL AND SINGLE-SEX RESIDENCE HALLS

A thesis

Presented to

The School of Social Sciences, Education & Business

Department of Higher Education and Student Development

Taylor University

Upland, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Higher Education and Student Development

by

Jason Katsma

May 2019

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**Higher Education and Student Development
Taylor University
Upland, Indiana**

CERTIFICATE OF APPROVAL

MASTER'S THESIS

This is to certify that the Thesis of

Jason Dean Katsma

entitled

On-Campus Living: A Quantitative Exploration of Engagement in
Coeducational and Single-Sex Residence Halls

has been approved by the Examining Committee for the thesis requirement for the

Master of Arts degree
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Abstract

This study investigates residential living arrangements as they relate to engagement using the National Survey of Student Engagement. It examines any difference in men and women in engagement with living in coeducational or single-sex residence halls on a small, faith-based, liberal arts college in the Midwest. Engagement continues to show value in helping students get the most out of their college experience. This study found no significant difference between coeducational and single-sex residence halls. Also, no difference emerged between men and women populations of both living arrangements. This finding adds to research pertaining to the relationships between place of residence and engagement.

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Chapter 1

Introduction

In a variety of ways, students reap the rewards of attending college throughout their lives. The College Board, a not-for-profit organization that considers how college positively influences individuals and societies, found that, although graduates earn more money, the benefits go far beyond financial wellbeing (Baum, Ma, & Payea, 2013). However, simply attending college is not enough to maximize its effects. Individual effort and involvement are the keys to learning and growth (Astin, 1984; Pascarella & Terenzini, 2005). That process is referred to as “student engagement” in higher education literature. Involvement and engagement are used interchangeably in this study. Involvement promotes students using their time wisely during college to maximize learning inside and outside of the classroom. Colleges and universities must consider the most effective means of fostering involvement, since engagement is crucial to learning.

Higher education serves an increasingly diverse student population, with three fourths of all college students now enrolling more than one year after high school, being financially independent from parents, working full time, or being responsible for children (Kirst & Stevens, 2014). Thankfully, access to higher education is widening, yet better understanding of the involvement of traditional students is still of great value. This study focused on traditional-age (18-23) college students living in on-campus housing.

Historically, living in residential housing was considered the factor most associated with high levels of involvement (Chickering, 1974). A student living on campus was more involved than a student commuting from home or living off campus. However, more recent studies found living within walking distance of campus produced similar results to living on campus (Graham, Hurtado, & Gonyea, 2016). Living on campus is beneficial for students, but “we should not rely on aging assertions that living on campus is good in and of itself” (Graham et al., 2016, p. 23). Instead, research must be conducted concerning which elements of the living environment prove most advantageous to students.

Residential living is accepted as a dynamic and impactful factor in shaping student learning, as students have more time to eat, sleep, and interact with their peers (Schroeder & Mable, 1994). Astin (1993) and Pascarella (1985) contended the benefits of living on campus result from greater opportunities for higher levels of involvement. Though in the past residence halls were quite similar to one another, today many different living environments are available to students. Less clear and rarely explored is how different types of residence halls, specifically co-educational versus single-sex residence halls, impact student engagement. Of particular interest for this study was gaining an understanding of whether or not students have varying levels of engagement based on living in a single-sex residence hall as opposed to a co-educational residence hall.

Astin (1993) maintained peer influence is paramount to engagement. If Astin (1993) was correct, then it raises the question of whether different peers and different types of living arrangements might influence the nature of student involvement. Because of the established importance of engagement in student learning, it would be beneficial to

better understand whether differences exist in levels and patterns of engagement between students living in same-sex halls and those living in coed residence halls. Though gender has been found as a factor in engagement (Hu & Kuh, 2002; Kellom, 2004; Larabee, 2007) and though peers influence each other (Bond, Chykina, & Jones, 2017; Ryan, 2000), the majority of research has not explored potential differences related to engagement in these varied living arrangements.

Research Questions

Research demonstrates the importance of involvement on a college campus (Astin, 1993; Kuh, Schuh, & Whitt, 1991). Better understanding of how on-campus living arrangements impact students' involvement is important. This study was intended to contribute to the limited body of research related to the relationship between involvement and different types of on-campus living arrangements, particularly with regard to differences in student engagement between coeducational and single-sex halls. Thus, the research question and sub-questions guiding the research were as follows:

- Is there a difference in student engagement based on coeducational compared single-sex residence halls?
 - Do women who live in coeducational residence halls have different levels of engagement than women who live in single-sex residence halls?
 - Do men who live in coeducational residence halls have different levels of engagement than men who live in single-sex residence halls?

Chapter 2

Literature Review

Student involvement was introduced as a construct within higher education when Astin (1984) concluded the more a student is involved in college, the more likely the student is to find success in college. Astin (1984) defined involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (p. 297). Patton, Renn, Guido, and Quaye (2016) noted Astin’s theory “focuses on factors facilitating development” rather than “examining developmental growth” itself (p. 35). Involvement theory prioritizes the degree to which students are occupied in activities leading toward growth.

A variety of factors including extracurricular activities, peer input, and of course academic experiences can impact a student’s learning. Presence and investment in the learning process are important factors facilitating different development within each student. Efforts to measure involvement generally focus on the types and amount of educationally purposeful activities a student experiences—in and out of the classroom. In particular, involvement theory explores the quality and quantity of time spent on task.

The idea of student engagement is similar to involvement and builds upon Astin’s (1984) theory. Kuh (2009) stated, “Student engagement represents the time and effort students devote to activities that are empirically linked to desired outcomes of college and what institutions do to induce students to participate in these activities” (p. 683).

Pascarella and Terenzini (2005) proposed individual effort as the single most important factor on the impact of college. Ultimately, a student is responsible for engaging in the learning process. However, the idea of engagement considers how colleges might promote practices leading to better outcomes. Both the student and the college hold the power and responsibility to increase engagement.

The concept of student engagement stimulated the collection of data to assess the quality of institutional and student effort. In particular, data collection is intended to measure factors known to positively influence undergraduate student outcomes (National Survey of Student Engagement, 2018a). The National Survey of Student Engagement (NSSE), begun in 2000, was one of the earliest and most significant attempts to assess student engagement. This survey exists to study student engagement in institutions and across higher education in four major engagement areas: academic challenge, learning with peers, experiences with faculty, and campus environment (Gonyea, Graham, & Fernandez, 2015). Together, these four indicators give a holistic picture of engagement.

Off-Campus Living

Before the constructs of involvement and engagement were formalized, Chickering (1974), one of the first authors to discuss the difference between living on campus and off, recognized the influence of living arrangements on student experience. His work led him to conclude living on campus was educationally and developmentally the best option for a student because students interacted more with academic programs, academic ideas, faculty members, and peers, providing a clear advantage compared to their non-residential counterparts (Chickering, 1974). Conversely, he found “in every

area students who do not live in on-campus residence halls, fraternities, or sororities are less involved than their resident peers” (p. 63).

Others, including Astin (1977, 1984, 1993) and Pascarella and Terenzini (1991), also pointed out the positive effect living on campus has on student engagement. Later, Pascarella and Terenzini (2005) found an increase in persistence, faculty-student interactions, and participation in extracurricular activities for students living on campus but also noted this difference proved less prominent than before and likely indirect.

Since the development of NSSE, data continues to validate the notion that commuter students are generally less involved than residential students. NSEE data from 2000 and 2001 found almost 80% of college seniors live off campus, and these students were less invested in effectual educational practices (Kuh, Gonyea & Palmer, 2001). The same surveys showed students who live on campus have more interaction with faculty, more meaningful educational experiences, and larger growth in personal and social competence (Kuh et al., 2001). However, while residential students had advantages, their commuter peers did score at approximately the same level on engagement related to working on group projects, class participation, and writing papers (Kuh et al., 2001).

A strong body of research indicates living on campus remains the most important factor in determining the impact of college (Chickering, 1974; Pascarella & Terenzini, 1991). Graham and colleagues (2016), in a recent study utilizing NSSE, offered new findings related to living on or off campus. The NSSE distinguishes between off-campus students as within walking distance of campus and those students outside of walking distance (National Survey of Student Engagement, 2018a). The largest engagement differences noticed were with the population living farther than walking distance to the

campus. Students living on campus were similar to students who lived within walking distance of the university (Graham et al., 2016).

These more recent findings underscore the fact simply living on campus does not assure student success nor does living off campus indicate failure. According to Graham et al. (2016), “We need to parse out the sources of positive impact, further investigating the environment, the programming, and the peer interactions so as to improve practice” (p. 23). Though Mayhew et al. (2016) indicates the effects of on campus living are limited, trying to understand the influence of various environmental factors still hold value. Graham et al. (2016) gave a qualified endorsement of the positive impact a residence hall can have on students:

While we found that living on campus had only a negligible effect on students’ engagement and perceived gains, as many practitioners and research have presumed before us, we believe that residence halls have the potential to positively impact the student experience. However, we should not rely on aging assertions that living on campus is a good in and of itself. (p. 23)

On-Campus Living

One main element of a co-curricular experience is the place of residence during college. Since its colonial beginnings, higher education in the United States has had residential living (Thelin, 2011), and it offers a unique opportunity for more complete immersion in the learning environment of a college or university. Schroeder and Mable (1994) addressed the need to integrate students’ formal academic experiences with their informal out-of-class life in their residence halls. They discussed the role of residence halls in educating students and demonstrate the educational impact of such spaces. Both

the intellectual learning and the interpersonal climate present in the environment of a residence hall have the potential to challenge students to grow and develop, learning more about oneself, others, and the world. Schroeder and Mable (1994) concluded, “Residential living can be a powerful force in shaping both the essential character and the developmental impact of an individual’s college experience” (p. 39).

As early as the 1950s in the United States, coeducational housing was designed to match fluctuating male-female enrollment numbers and create natural relational development (Imes, 1966). Residence halls that house both genders allowed universities to respond to changing demands and fluctuating enrollment numbers. When first proposed, the idea of men and women sharing the same residence hall facility was quite controversial. Allegations ranging from corrupting the morals of young people to undermining the academic purpose of higher education were advanced by those who wanted to retain single-sex residence halls (Blimling, 1993). Although initially resisted, surveys of member institutions of the Association of College and University Housing Officers- International (ACUHO-I) showed the number of colleges with coeducational housing facilities increased from 51% in 1967 to 85% in 1978 (DeCoster, 1979).

Co-educational housing is practical and thought to have social benefits. Initial research on co-educational halls investigated the influence those settings have on students compared to single-sex residence halls. Studies shows more social interaction with the opposite gender in coeducational residence halls (Jacokes, 1975; White & White, 1973). Coeducational housing often has an environment that “provides a ready-made social life for the shy student . . . as well as a setting for casual friendship, which lead[s] to a better understanding of attitudes and interests between men and women” (Imes, 1966, p. 6).

Some evidence also suggests students living in co-educational residence halls have more informal friendship-type social involvement with members of the other sex than students living in single-sex residence halls (Schroeder & Mable, 1994). Each sex has an opportunity to interact with and learn from the other about differences and similarities. Co-educational residence halls also tend to lead toward more “brother-sister” type of friendships among students (Blimling, 1993).

With the study of co-educational residence halls comes the acknowledgement male and female students experience these residence halls differently. Moos and Otto (1975) examined differences in freshmen before and after their first year of living in a single-sex or coeducational residence hall. Female students in single-sex residence halls increased substantially in social activities and impulsive-deviant behavior, such as skipping class, drinking alcohol, and breaking rules. Females in co-ed halls decreased their educational aspirations and were significantly more likely to drop out of college or transfer to another residence hall than females in single-sex residence halls.

Results for male students in coeducational halls show they perceived their living environment as more supportive of social interaction and impulsive-deviant behavior, and less supportive of demanding academic and career goals (Moos & Otto, 1975). Blimling (1993) explained, “this latter finding suggests that coeducational living environments may allow men to experience a lifestyle less dominated by traditional male sex role demands associated with power achievement and competing” (p. 272).

With the development of engagement on campus, NSSE can provide greater insight into the impact of differential living arrangements on involvement on campus. Graham et al. (2016) suggested “research should seek to better understand how differing

populations experience on-campus living differently, with the intention to address less positive experiences” (p. 23).

Gender Differences

Understanding how male and female students experience co-educational and single-sex residence halls is important. Women lead men in enrollment, average GPA, and degree completion in college (Sax, 2008). While these gains are notable, many areas of concern persist. For instance, women continue to be underrepresented in many fields and report higher levels of stress than male counterparts (Sax, 2008). While not much literature exists about the experiences of men and women in different types of residence halls, information is known about differing experiences in college more broadly.

For example, one troubling theme of the student engagement literature is the lower level of involvement of men in comparison to women (Aalderink, 2012; Kuh, 2003). The overwhelming majority of research finds women more engaged than men (Hu & Kuh, 2002). NSSE data from 2005 and 2006 indicates, though men were more likely to get involved in non-academic and co-curricular activities, they were less likely to prepare for class (Kinzie et al., 2007b). In addition to devoting more time to academic activities, women also communicate more often with faculty via email, attend more theatrical and artistic events, and participate in learning communities at a higher rate than men (Kinzie et al., 2007b). The only academically oriented item on which men outscored women was discussing ideas with faculty outside of the classroom setting (Kinzie et al., 2007b). Evidence also suggests single-sex environments impact students differently.

Kinzie, Thomas, Palmer, Umback and Kuh (2007a) compared the NSSE data of women at women’s colleges to those in coeducational institutions. In general, women at

single-sex colleges prove more engaged than women at co-education institutions. Both first-year and senior women attending women's colleges reported higher levels of academic challenge. Seniors at women's colleges were more likely to engage in higher-order thinking activities than seniors at coeducational institutions.

Similarly, both seniors and first-year students at women's colleges scored higher on active and collaborative learning and student-faculty interaction than their counterparts at coeducation institutions. Women at women's colleges were more likely to engage in interactive activities that lead to deep learning (Kinzie et al., 2007a).

Although Kinzie et al. (2007a) study compares types of institutions and not residence halls, it provides a comparison of women in a single-sex environment as compared to a coeducational setting and, thus, is relevant to this study. Sax (2008) summarized the importance of the type of research proposed in this investigation: "it is now incumbent on researchers to extend our understanding of college impact by uncovering which types of students benefit from which college experiences" (p. 4).

Summary

Student involvement or engagement is a critical element of student success (Astin, 1984, 1985; Kuh, 2009; Pascarella & Terenzini, 2005). Greater engagement leads to more success in college. Therefore, it must be a priority for all colleges and universities that are committed to student learning. Historically, on-campus living led to greater engagement (Astin, 1977, 1993; Chickering, 1974; Kuh et al., 2001; Pascarella & Terenzini, 1991). However, recent studies have called this understanding into question (Graham et al., 2016). Proximity to campus seems an important factor for increasing

engagement. Students within walking distance of campus show similar patterns of involvement as students living on campus (Graham et al., 2016).

Different living environments of residential students receive little research attention using the construct of engagement. Thus, exploring the engagement patterns of students living in coeducational and single-sex residence halls provides a helpful understanding of the impact of these environments. Although both living environments are on campus, students' experiences are characterized by different living arrangements and different peer dynamics.

This study looked at the difference in student engagement based on co-educational compared single-sex residence halls and also considered the following subset questions:

- Do women who live in coeducational residence halls have different levels of engagement than women who live in single-sex residence halls?
- Do men who live in coeducational residence halls have different levels of engagement than men who live in single-sex residence halls?

Chapter 3

Methodology

The purpose of the study was to see if any difference appeared in student engagement based on coeducational versus single-sex residence hall arrangements. This research contributes to the broader body of literature considering the relationship between environment and college student engagement. Specifically, this quantitative study sought to determine the existence of any difference in students' level of engagement based on coed versus traditional residence halls. A benefit of this analysis is a better understanding of the relationship between engagement and coeducational versus single-sex residential arrangement. A secondary benefit is a better understanding of how these patterns of engagement may vary by gender.

Research Context

It is hypothesized different living environments result in different involvement outcomes. This research utilized three main variables: type of residence hall, sex, and level of engagement. The independent variables were students' type of residence hall and their sex. The dependent variable was student level of engagement as a whole. In other words, are male and female students' levels of engagement influenced by the type of residence hall in which they live? These variables were chosen to better understand the effect of styles of residence halls on engagement.

The research was conducted at a small, faith-based, liberal arts college in the Midwest. This college is primarily residential with approximately 1,900 undergraduates. Of this number, about 54% are females and 46% are males. Though a limited number of upperclassmen may receive approval to live off campus, 85% of the students on this campus live in residence halls. This campus has four co-educational residence halls and four single-sex residence halls. Each residence hall is integrated with freshmen through seniors living throughout the building. The integration and residential requirement tend to create a strong bond between students and their residence halls.

Instrumentation and Measures

The National Survey of Student Engagement (NSSE), the instrument used to collect the data in this study, was developed in an attempt to measure students' engagement in educationally purposeful activities as well as institutional efficacy in promoting desirable behaviors (Kuh, 2001). The Indiana University Center for Postsecondary Research, the body responsible for the survey, found reliability coefficients for NSSE items ranging from .69 to .75. Additionally, they found the survey to be valid and to not have significant nonresponse bias (NSSE, 2018b).

For this study, campus NSSE data from 2014 and 2017 were used to compare levels of engagement by gender and type of residence hall. The combination of the four major themes of engagement measured by NSSE—academic challenge, learning with peers, experiences with faculty and campus environment (Gonyea et al., 2015)—are congruent with the dependent variable, overall level of engagement. The 20 NSSE items included in analysis are representative of the four engagement indicators and were selected to give a complete picture of the dependent variable. Each item asked students

to respond on a 4-point Likert scale with options ranging from “never” to “very often.”

See Appendix A for a list of the survey items.

Participants

This study used archival campus data collected from the 2014 and 2017 NSSE. NSSE only collects data from freshman and senior students. The total number of completed surveys in 2014 was 398 and, in 2017, was 351. After eliminating students who did not live in on-campus residence halls, a total of 493 students between the two years was found: 211 men and 282 women. Of this total, 162 men and 176 women lived in single-sex residence halls.

Procedures

During the springs of 2014 and 2017, students were emailed an invitation to participate in the online survey. At the time of administration, incentives were offered in an attempt to maximize the response rate. Once access to the housing roster and NSSE data were approved, data analysis proceeded. The housing roster was used to match NSSE responses with residence hall types using student identification numbers from both lists.

Data Analysis

Responses to all items in the NSSE engagement scale (Appendix A) were totaled to create a composite score for each student. The composite score was averaged to create a level of engagement score for each student. Means were also created for the four individual benchmarks with the corresponding items. Any difference in levels of engagement between male and female students in single-sex and coeducational halls were found by comparing means through a t-test.

Chapter 4

Results

The purpose of the study was to explore the relationship between a student's sex and type of residence hall on his or her engagement in college. This chapter includes descriptive statistics based on the data collected from NSSE, as well as more detailed descriptions of important differences in means resulting from t-tests.

The descriptive statistics displayed in Table 1 are the sample size (n), mean (M) and standard deviation (SD). The statistics are given for the entire sample and for subgroups by type of hall and gender in the two living arrangements. The level of engagement score was calculated by averaging the composite score for each participant over the 20 items drawn from NSSE (see Appendix A). Participant responses were converted to numerical values from the original Likert scale ("Never" = 1, "Sometimes" = 2, "Often" = 3, "Very Often" = 4), then averaged.

Very little difference in average engagement was found, with the two largest differences in means emerging between men in single-sex and coeducational halls (0.10) and between men and women in coeducational halls (0.17). The mean of the women is higher than the mean of the level of engagement for men.

Table 1

Average Level of Engagement by Residence Hall Type and Gender

<u>Engagement</u>	<u><i>n</i></u>	<u><i>M</i></u>	<u><i>SD</i></u>
Total	493	2.81	.40
Single-sex	338	2.81	.40
Coeducational	155	2.81	.41
Men	211	2.76	.40
Single-sex	162	2.79	.40
Coeducational	49	2.69	.42
Women	282	2.85	.40
Single-sex	176	2.84	.41
Coeducational	106	2.86	.39

With means appearing so close together, t-tests (see Tables 2-4) determine if there was any statistically significant difference between populations. Tables 2-4 report differences between the level of engagement of students living in different types of residence halls and students of different sexes. Since larger variance exists between genders in each residence hall, the t-test tables also show the breakdown of the four categories contributing to level of engagement, for comparison. Table 2 compares coeducational and single-sex halls. Tables 3 and 4 compare single-sex and coeducational halls by gender, male and female respectively. The t-tests echo the similarity of the means.

Table 2

Single-sex and Coeducational T-test

<u>Variable</u>	<i>t</i>	<i>df</i>	<u>Sig. (2-tailed)</u>	<u>Mean Difference</u>	<u>Std. Error Difference</u>	<u>95% Confidence Interval</u>	
						<u>Lower</u>	<u>Upper</u>
Level of Engagement	.195	491	.846	.008	.039	-.069	.084
Learning with Peers	1.417	491	.157	.086	.061	-.033	.205
Experience w/ Faculty	-.039	491	.969	-.003	.064	-.129	.124
Academic Challenge	-.126	491	.900	-.007	.057	-.120	.105
Campus Environment	-.356	491	.722	-.019	.054	-.125	.086

Table 3

Men in Single-Sex and Coeducational T-test

<u>Variable</u>	<i>t</i>	<i>df</i>	<u>Sig. (2-tailed)</u>	<u>Mean Difference</u>	<u>Std. Error Difference</u>	<u>95% Confidence Interval</u>	
						<u>Lower</u>	<u>Upper</u>
Level of Engagement	1.550	209	.123	.102	.066	-.027	.232
Learning with Peers	1.540	209	.125	.157	.102	-.044	.357
Experience w/ Faculty	-.652	209	.515	-.066	.102	-.267	.134
Academic Challenge	1.000	209	.318	.097	.097	-.094	.287
Campus Environment	1.842	209	.067	.161	.087	-.011	.332

Table 4

Women in Single-Sex and Coeducational T-test

<u>Variable</u>	<u>t</u>	<u>df</u>	<u>Sig. (2-tailed)</u>	<u>Mean Difference</u>	<u>Std. Error Difference</u>	<u>95% Confidence Interval</u>	
						<u>Lower</u>	<u>Upper</u>
Level of Engagement	-.474	280	.636	-.023	.049	-.120	.074
Learning with Peers	.663	280	.508	.051	.077	-.101	.203
Experience w/ Faculty	.220	280	.826	.018	.085	-.149	.186
Academic Challenge	-.685	280	.494	-.049	.072	-.191	.093
Campus Environment	-1.016	280	.311	-.069	.067	-.201	.064

As seen in Tables 2, 3, and 4, none of the t-tests indicate a statistically significant difference between single-sex and coeducational residence halls. In other words, regardless of sex, single-sex and coeducational residence halls have a similar engagement across the institution. The data from students at this small, faith-based, liberal arts college indicate coeducational and single-sex halls do not produce different outcomes in how students engage on their college campus.

Chapter 5

Discussion

With recent studies showing mixed support for the benefits of on-campus living (Graham et al., 2016; Mayhew et al., 2016), campus housing administrators must explore potential factors that help them determine which types of living arrangements benefit students most. The similar engagement for students in both residence halls were worth noting to practitioners in the field of college housing. Following a brief discussion, implications for practice and future research are offered to continue exploring the impact of residence halls on students.

Though not statistically significant, there were slight numerical differences. The men in this study had lower levels of engagement than women overall (2.76 compared to 2.85) as well as in each residence hall types. Lower levels of engagement among males are consistent with previous findings from other studies (Aalderink, 2012; Kuh, 2003).

The lack of statistical significance, however, must be noted. The results give reason to ponder whether single-sex and coeducational halls seemed to produce slightly different results for males and females—and in unexpected directions. The variance between the means for men is among the widest in the data, with men in single-sex halls potentially indicating higher levels of engagement than those living in coeducational halls. On the other hand, women had higher levels of engagement when living in an environment with men. The latter points to a different pattern than that found by Kinzie

et al. (2007a), in which women showed a higher engagement score in a single-sex environment.

Taking these two findings together, while one might expect the presence of women, who generally show higher levels of engagement, would raise the level of the men's engagement, the data did not prove this to be true. Stated differently, though one would have expected men in coeducational residence halls to be more engaged in their college experience because of the interaction with a more engaged population of (female) peers, the data actually showed them slightly less engaged. Women in coeducational halls scored minimally higher, which also counters the notion that living among less-engaged (male) peers would have a negative impact on engagement.

The nature of the researched institution might play a role in explaining this difference by placing a higher cultural importance on single-sex male residence halls. Single-sex male halls have more notable and public traditions that could have some impact on the engagement of men across campus. Even though the women already engage slightly more across campus, one might speculate that women in coeducational settings may benefit from proximity to the higher levels of male involvement on this campus.

Despite these observations, ultimately it must be acknowledged that the lack of significance in this study obscures the ability to fully understand the role of the residence halls in fostering engagement. The role of a residence hall in fostering engagement is not fully understood, but as the results of this study reveal, engagement is not statistically different between two types of residence halls. An explanation for this similarity is that the researched institution places such a high value on the experience of residential

students that the similarity of engagement across residence halls may reflect consistency from one building to the next. The guiding principles and values of residence life as a whole at this institution are upheld from one building to another and add to this similarity in engagement data. These findings indicate schools should continue to offer a variety of residence hall experiences for students, assuming each experience provides adequate opportunities and resources to encourage student engagement.

This investigation was not sensitive enough to discern differences in the finer points of engagement. The similarity in the data raises important points of discussion about effective practices in campus housing for more particular constructs of engagement. Tables 2, 3, and 4 showed some variance in four categories of NSSE indicators, but nothing falling outside of a 95% confidence interval, much less more rigorous standards. Additional precision may be possible if considering more specific outcomes among halls with different living arrangements.

Implications for Practice

As housing options continue to change across higher education, staying abreast of new developments is critical. Residence life professionals need to maintain an educational mindset to learn how other schools address and design housing options on campus. Practitioners also need to learn how students experience their time on campus and make adjustments to maximize learning benefits.

The similarity between levels of campus engagement by residents of single-sex and co-educational residence halls should not encourage practitioners to assume each residence hall will function the same. Instead, the results of this study give student affairs professionals a solid base for knowing residence halls engage similarly across

campus and considering carefully how to utilize better the unique qualities of different living arrangements. This consideration proves especially important when the data from this study conflict with existing literature, perhaps indicating a need for greater depth and nuance in describing trends.

Given the current results, housing professionals should consider how they might address the lower levels of engagement of men, in particular. If the gender makeup of a residence hall does not seem to produce significant differences in engagement, what other factors of living environments will increase engagement of men? While waiting for future research to better understand impact, housing professionals must continue to promote living arrangements currently understood as most optimal for fostering engagement. Longstanding research findings make it clear they would do well to continue to live into the mission and vision for on-campus living.

Student affairs practitioners need to continue to use residence halls as a tool for promoting engagement. Encouraging students to interact actively with others and with the campus around them promotes learning. Students living in residence halls are surrounded by other learners whose lives and experiences can serve as enriching influences. Being surrounded by students of different experiences and beliefs is one of the chief benefits of the residential experience. The residence hall can be a place for freshmen and sophomores to practice habits of being involved in campus life like going to educational events outside of one's chosen field, seeking out quality interactions with faculty, and learning from peer tutors. Living in a coeducational hall and spending considerable time with peers of the opposite sex could generally help opposite sex relationships to become more comfortable and less intimidating.

As residential educators actively promote student engagement, they need to continue to treat residence halls as a serious learning environment. Residence halls cannot be simply places to live and sleep. Institutions do well to assess how their living environments help or hurt the learning of students at the institution.

Implications for Future Research

The combination of recent research results (Graham et al., 2016; Mayhew et al., 2016) and the fact that no significant differences appeared in the results of the current study indicate the role of a living environment in how a student engages on campus is not fully understood. Practitioners and researchers would be wise to continually work to understand how various on-campus living environments differ in their impact.

Furthermore, if the type of residence hall is not a major influence, what other elements might impact student engagement? The activities of on-campus living resulting in a positive engagement still needs analyzing (Graham et al, 2016). The co-curricular programming in on-campus housing, the size of the residence halls, and differing populations residential facilities are all variables that might influence engagement.

This study did not take into account different types of programming in the residence halls or how often students attended this programming. Future research can look at purposes and programming of residential living environments. Investigators could examine integrated academic activities and other initiatives.

In addition, the data in this study do not explain how residence halls help or hinder the engagement of students but simply show no difference. A good way to better recognize differences of on-campus living arrangements is exploring qualitative assessments. Should there be differences in campus living arrangements? How do other

arrangements, beyond coeducation and single-sex residence halls, influence a student's experience of college, instead of the location? Do diverse students feel supported in every on-campus living environment? Why do some students prefer different on-campus living arrangements? These questions represent various potential avenues through which to better assure quality on-campus living environments for students.

A recent study looking at the relationship between Residential Learning Communities (RLC) and student engagement provides a beneficial model for future research. An aging assertion of RLCs' positive impact was called into question and researched by looking exclusively at RLCs' impact for the students involved in those living environments. Hurtado, Gonyea, Graham, and Fosnacht (2019) studied RLCs and concluded they represent effective educational practices and improve student success while being intentional on-campus living environments.

Limitations

Several limitations must be noted when considering the study results. The sample was from a faith-based institution in the Midwest and should not be presumed to represent the whole college student population living in campus residence halls. To alleviate this limit, different school makeups and samples can bring validity to this study.

The residential requirement and community focus of the institution may alter the engagement of students. This requirement made the differences less perceptible since the institution expected a higher level of engagement for all students. A school with more commuting students might display a different residential experience. A larger school with less community focus on the campus might show different levels of engagement.

Finally, as previously mentioned, this investigation may not have been sensitive enough to discern differences in engagement levels of particular groups and particular levels of engagement. The researcher's choice to consider engagement as a whole construct instead of specific NSSE scales showed overall trends, but focusing on particular survey items might give more insight into why the current data seems to reveal contradictions. Different groups of students might also experience residential living differently and show differences in engagement.

Conclusion

With the traditional belief in the benefits of engagement coming from on-campus living (Astin, 1977, 1993; Chickering, 1974; Kuh et al., 2001; Pascarella & Terenzini, 1991) being recently questioned (Graham et al., 2016; Mayhew et al., 2016), the assessment of on-campus living environments has increased. Additional literature points to different levels of engagement of genders on college campuses (Aalderink, 2012; Kinzie et al. 2007b; Kuh, 2003). Given the fact that residence halls are present on so many college campuses, educators must ask if differences exist in student engagement between co-educational and single-sex residence halls.

The data collected in this study indicated no significant difference in levels of engagement between coeducational and single-sex residence halls at a small, private faith-based liberal arts college in the Midwest. Although slight numerical variances were present between the different genders, no significant difference existed between men and women living in the two different types of residence halls. Residence halls are powerful tools to facilitate student learning but only if educators commit themselves to understanding their impact on students' lives.

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Appendix A

NSSE Engagement Scale

Item Number. (Item)

Learning with Peers (During the current school year, about how often have you done the following?)

- 1. (e) Asked another student to help you understand course material
- 1. (f) Explained Course material to one or more students
- 1. (g) Prepared for exams by discussing or working though course material with other student
- 1. (h) Worked with other students on course projects or assignments

Experiences with Faculty (During the current school year, about how often have you done the following?)

- 3. (a) Talked about career plans with a faculty member
- 3. (b) Worked with a faculty member on activities other than course work (committees, student groups, etc.)
- 3. (c) Discussed course topics, ideas or concepts with a faculty member outside of class
- 3. (d) Discussed your academic performance with a faculty member

Academic Challenge (During the current school year, how much has your coursework emphasized the following?)

- 4. (b) Applying facts, theories, or methods to practical problems or new situations
- 4. (c) Analyzing an idea, experience, or line of reasoning in depths by examining its parts
- 4. (d) Evaluating a point of view, decision, or information source
- 4. (e) Forming a new idea or understanding from various pieces of information

Campus Environment (How much does your institution emphasize the following?)

- 14. (b) Providing support to help students succeed academically
- 14. (c) Using learning support services (tutoring services, writing center, etc.)
- 14. (d) Encouraging contact among students from different backgrounds (social, racial/ethnic, religious, etc.)

- 14. (e) Providing opportunities to be involved socially
- 14. (f) Providing support for your overall well-being (recreation, health care, counseling, etc.)
- 14. (g) Helping you manage your non-academic responsibilities (work, family, etc.)
- 14. (h) Attending campus activities and events (performing arts, athletic events, etc.)
- 14. (i) Attending events that address important social, economic, or political issues

