DIMENSIONS OF STUDENTS’ SATISFACTION WITH RESIDENTIAL HOUSING AND ITS IMPACT ON THEIR LOYALTY – A SOUTH AFRICAN STUDY

Mthobisi Nhlabathi  
MM Strategic Marketing  
University of Johannesburg  
e-mail: mthobisin@uj.ac.za

Abstract
As an important component of student lifestyle, satisfaction with residential housing has become important in examining student housing quality and services. The current study used five attributes – bedroom environment, building quality, washroom facilities, support services, and leisure room facilities – to examine the relationship between student satisfaction with and loyalty to their residential housing. Each construct was measured using four items on a five-point Likert scale, ranging from 1 ‘Strongly disagree’ to 5 ‘Strongly agree’. The data were collected from South African students aged 18 years and above in tertiary institutions in Johannesburg, using paper-based questionnaires. Four hundred and forty-three (443) usable questionnaires were obtained for the analysis. The results showed that all the attributes, except for the bedroom environment, had a positive and significant relationship with student loyalty to student housing, although the effect was small for all the attributes. The control variables – age and gender – showed a similar relationship in regards to student loyalty. Academic and management implications of this study’s results are also discussed extensively. Overall, students’ satisfaction with residential housing dimensions has a positive and significant impact on their loyalty to the providers of residential housing.

Key words: Satisfaction, loyalty, students, residential housing, South Africa.

JEL Classification: L85, R21, R29, R31.

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1. Introduction
Housing is a multifaceted global phenomenon that affects people at different stages of their lives, such as bachelorhood, newly-weds, parenthood, post-parenthood, to mention a few (Nurdini & Harun, 2011; Ugutu, 2013). The choice of buying or renting housing is dependent on the needs of consumers. “Rental housing”, according to Nurdini and Harun (2011), refers to residential property with rental status in part or all of its units. Three categories of common rental circumstances, as identified by various researchers (Kemp & Keogh, 2001; Kenyon & Heath, 2001; Nurdini & Harun, 2011; Ugutu, 2013) are: temporary housing needed for a certain period, a voluntary preference for renting rather than ownership, and rental housing being cheaper to service than a mortgage.

The first category – the need for temporary housing – extends to students who need housing during their studies at institutions of higher learning (Amole, 2011; Nurdini & Harun, 2011). Student housing has increasingly become a global phenomenon. Its relevance in South Africa has become more evident in recent years, following several student protests around the country over several issues, including student accommodation. Extant literature has highlighted student rental housing as an important commodity in the housing market, as institutions have increasingly struggled to
accommodate the mounting number of students who require a place to live (Nurdini & Harun, 2011). The student housing backlog, according to the Department of Higher Education and Training (DHET) 2016 Report, stood at 216,000, with a further shortage of 400,000 expected by 2030 (Verhoef, 2020). In 2011, only 5% of first-year students could be accommodated in on-campus student housing.

To close this gap, private rental housing providers have intervened. Students’ accommodation needs have changed over the recent years, with some requiring luxurious and high-quality housing with features ranging from private rooms to an en-suite style design, all of which private housing providers can offer (Chan et al., 2011).

The main challenge of private student housing in South Africa is that it is regulated neither by the management of the universities whose students it serves, nor by any industry regulatory body. Therefore, students are not guaranteed a quality of dwellings that meets their needs and budget (Nurdini & Harun, 2011). While it was suggested by various researchers that student accommodation providers need to consider students’ needs and wants when developing facilities, so that they create a suitable living-learning environment that provides adequately for the students’ lifestyle and their academic and personal development (Fish, 2010; Muslim et al., 2013; Najib et al., 2015), it remains to be seen whether the current private student accommodation offerings fulfill these needs. What is noteworthy is that the number of non-residential accommodation providers has increased remarkably over the years, leading to intense competition among them to attract occupants. Promoting loyalty among existing occupants has become a priority for the industry. Extant literature used the length of stay in the same accommodation or housing to measure the level of loyalty (Amole, 2009). This was because students tended to adapt to the living conditions the longer they stayed in their student housing.

The literature is replete with several studies that examine various issues connected with student accommodation. Amole (2009) examined students’ satisfaction with student housing in Nigerian universities. The main finding of the study suggested that student housing did not meet students’ expectations. Seeing as how extant literature found that morphological configuration (corridor length, bathroom and kitchen forms, corridor loading and plan form) of residences predicts students’ satisfaction with their residential housing, it is also important for housing providers to pay attention to students’ feedback on their residences, reduce social densities, and offer students more choices (Amole, 2009).

1.1. Research aims and objectives

Although the studies outlined in the previous section make important contributions to the literature on student housing, the issue of how different dimensions of students’ satisfaction with their accommodation determine their loyalty to private accommodation has not received research attention. To address this research opportunity, the present study aims to examine the impact of students’ satisfaction with the various facets of private accommodation on their loyalty to the service providers. Understanding this issue is not only a research imperative; it also has managerial implications for the developers and managers of student accommodation in their effort to encourage the retention of their tenants.

2. Literature review

2.1. Overview of the dimensions of students’ satisfaction with student accommodation

Various authors used different approaches to define the concept of satisfaction. Amole (2009) conceptualized “satisfaction with accommodation” using two approaches: purposive and aspiration-gap. The purposive approach explains the concept as the degree to which the environment prohibits or facilitates a user’s goal (Canter & Rees, 1982; Oseland, 1990; Amole, 2009), while the aspiration-gap approach defines the concept as the gap between a consumer’s actual needs and their aspirations (Galster, 1987; Amole, 2009). Francescato, Weidemann, and Anderson (1989) defined “satisfaction” as an attitude and as a multifaceted construct with cognitive, affective, and conative dimensions. Table 1 summarizes the description of satisfaction by various authors. This study also took a multifaceted approach to study satisfaction to accommodate the different attributes measured: social attributes (bedroom environment), and physical attributes (building quality, washroom facilities, support services and leisure room facilities).
In their study of people’s satisfaction with their residential housing, authors argued that extant studies have yielded complex trends in the relationships between consumer satisfaction and housing attributes like neighborhood, management, and system factors (Ugutu, 2013). Other studies categorized “satisfaction with housing” attributes into three groups: material, spiritual, and system satisfaction (Ugutu, 2013). In residential housing, consumer satisfaction is measured through three categories of housing attributes: social (e.g., privacy, neighborhood, safety and security, social densities, choice), management (e.g., rules and regulations, policies, management staff, rents) and physical attributes (e.g., facilities, spatial densities, bedroom size, and location) (Kaya & Erkip, 2001; Kahana et al., 2003; Paris & Kangari, 2006; Amole, 2009). Kaya and Erkip (2001) added “building appearance” and “floor level” to the physical attributes. Amole (2009) explained that physical attributes such as the morphology of the building are very important in student housing, as the “type of housing” attribute (duplex, apartment, etc.) is not relevant. Other researchers defined “residential satisfaction” as the individual’s assessment of their housing environment conditions against their needs, expectations, and achievements (Muslim et al., 2013).

The standard of living in a country reflects on, among other factors, on people’s satisfaction with the residential and neighborhood quality, including housing. People’s satisfaction with their residential and neighborhood quality has a huge impact on individual perceptions of the quality of life (Idrus & Ho, 2008; Husin, et al., 2015). Studies of housing or residential satisfaction have mainly focused on the physical and social setting in terms of dwelling status, housing estate, and neighborhood quality (Campagna, 2016).

Several researchers have conducted studies in the Netherlands, Italy, or Turkey on residential satisfaction (Adriaanse, 2007; Berkoz et al., 2009; Fornara et al., 2010; Campagna, 2016). In a study of Malaysian low-cost housing, Husin et al. (2015) argued that housing features such as physical building quality, habitability, maintenance, suitability of housing, workmanship, and defects are good measures of housing safety. In a study of Spanish residents, Gómez-Jacinto and Hombrados-Mendieta (2002) found that dwelling level and community level were good predictors of residential satisfaction (Campagna, 2016). The literature has found crowding and poor housing quality to have a great impact on the social withdrawal and psychological distress of residents.

To manage issues of safety perceptions regarding housing, researchers have suggested that buildings be provided with continuous maintenance to improve perceptions of their quality, based on users’ behavior and feedback using the post-occupancy evaluation (POE) tool (Stevenson & Leaman, 2010; Husin et al., 2015). The POE is a useful tool for many agencies in the UK, the US, Canada, and other developed countries to gather information about occupants’ satisfaction with their general housing quality (Husin et al., 2015).

In a study of university dormitories (housing) in Nigeria, Amole (2009) highlighted “unit features” and “communal area” as the two main predicting factors of student satisfaction with residential housing (Campagna, 2016). To support this statement, the extant research has defined a “dwelling” as a social environment in which the residents’ and visitors’ gathering areas need to be of sufficient size, comfort, and appeal, thus enhancing levels of satisfaction (Wells & Harris, 2007; Rechavi, 2009; Campagna, 2016).

Amole’s (2009) study of Nigeria’s institutions of higher learning presented interesting insights into students’ aspirations in regards to and actual experiences with residential housing. Various
Researchers have argued that there is a gap between students’ aspirations and the actual experience of student housing provided by universities (Amole & Mills-Tettey, 1998; Amole, 2009). Overall, previous studies have come to the general conclusion that student housing provided by Nigerian universities did not live up to students’ expectations, thus leading to the conclusion that tertiary university students’ conditions in Nigeria were poor (Nwaka, 2000; Amole, 2009). A different perspective on student satisfaction focused on owner-occupied housing (Carvalh et al., 1997; Amole, 2009).

Amole’s (2009) study found that satisfaction was a multi-dimensional variable, predicted by both objective and subjective factors. These were categorized as physical, management/maintenance, place, or social dimensions. It also emerged that there were characteristics that strongly predicted satisfaction among both adults and students, such as the economic status of the consumer (Kellekc & Berkoz, 2006; Amole, 2009). Amole found maintenance factors to have an insignificant impact on satisfaction, although other studies did find them significant (Francescanto, 2002).

Table 2

| Type of study/activity conducted | Country                  | Author/s                  |
|---------------------------------|--------------------------|---------------------------|
| Student satisfaction with housing | Nigeria; Malaysia        | Amole, 2009               |
| Residential satisfaction with housing | Netherlands, Italy, Turkey | Adriaanse (2007); Berkoz et al. (2009); Fornara et al. (2010); Campagna (2016) |
| Post-occupancy evaluation too to assess satisfaction with general building quality | US, UK, Canada           | Stevenson and Leaman (2010); Husin et al. (2015) |

Source: own study.

2.2. Dimensions of students’ satisfaction with student accommodation

The next section will discuss five dimensions of students’ satisfaction with residential housing. These dimensions are: satisfaction with the bedroom environment, building quality, washroom facilities, support services, and leisure room facilities. Each attribute will be discussed using the extant literature; this will assist in formulating hypotheses for the current study.

2.2.1. Satisfaction with bedroom environment

In their study of student satisfaction with residential housing facilities in Malaysia, Najib et al. (2011) argued that a study bedroom is a significant component that every student deserves for their psychological, academic, social, and economic purposes. As a multi-faceted facility, the bedroom can be used for sleeping, studying, and living (Najib et al., 2011).

Amole (2010) examined how student bedroom comfort in sleeping, studying, relaxation, and entertainment was related to their satisfaction. As much as 43 per cent of the male respondents, compared with between 16 and 24 per cent of their female counterparts, were very dissatisfied with the number of people sharing the bedroom and hall. However, no significant differences emerged on respondents’ satisfaction with and attitude towards privacy, density, and freedom in the bedroom (Amole, 2010). Contrary to these findings, Amole’s (2009) study found that subjective variables (attributes) such as privacy in the bedroom, storage in the bedroom, the kitchen, the bathrooms, and the social and location qualities of the bedroom had significant predictive power with respect to students’ satisfaction with their residential housing. The study found the social and location qualities of the bedroom to be the most significant predictors of student satisfaction (Amole, 2009). Consequently, housing features with which students are satisfied will have a positive impact on their loyalty to student housing, and vice-versa.

2.2.2. Satisfaction level with building quality

Husin et al. (2015) study of low-cost housing in Malaysia found that respondents were moderately satisfied with the floors, walls, ceilings, ventilation, and workmanship. As for the buildings’ corridors, balconies, and security bars, respondents were highly satisfied. It also emerged in Amole’s (2009) study that the morphological configuration (corridor length, bathroom and kitchen forms, corridor
loading, and plan form) of student housing had a significant impact on student satisfaction. The main reason for the high level of dissatisfaction with the physical facilities was that basic public areas, such as the kitchen, were dysfunctional (Amole, 2009). Such inconvenience could lead to low levels of loyalty to student housing.

2.2.3. Satisfaction level with washroom facilities

It emerged that facilities such as bathrooms were very important predictors of student satisfaction, given the fact that the residences in question were overcrowded (Amole, 2009). Another significant insight that emerged was the fact that the basic facilities were shown to be the most important predictors of satisfaction. This is evident from the fact that the laundry room did not appear to have a greater predictive strength in respect of student satisfaction. Amole (2005) argued that the predictive strength of reading, common, and laundry rooms was lower, due to the possibility of students finding alternatives to these attributes, whereas this was not possible with bathrooms, kitchens, privacy, and social density in the bedroom.

2.2.4. Satisfaction level with support services

In a study by Husin et al. (2015) regarding the level of satisfaction with housing support service features, the majority of the respondents (80.80%) were dissatisfied with the lifts in their building, the main factor being frequent breakdowns and malfunctions. Other services such as the electrical wiring and fire safety services received a higher percentage of satisfaction levels. Furthermore, staircases and vehicle parking space achieved moderate satisfaction levels (Husin et al., 2015). Such different levels of satisfaction have a varied impact on student loyalty to residential housing.

2.2.5. Satisfaction with leisure room services

Attributes such as balconies as well as reading, laundry, and common rooms (including TV and computer rooms) did not emerge as predictors of student satisfaction with residential housing (Amole, 2009). Based on the state of social density at the student housing in question, those attributes that catered for basic living needs, such as bathrooms and kitchenettes, had higher levels of importance for students, with their presence increasing student satisfaction with housing. Leisure room services’ influence as predictors of satisfaction declined as students could find alternatives to reading and computer rooms (Amole, 2009).

3. Research model

The study presents a research model (Figure 1) and argues that various dimensions of students’ satisfaction with residential housing – including satisfaction with bedroom environment, satisfaction with building quality, satisfaction with leisure facilities, satisfaction with support facilities (services, i.e. parking space, cafeteria, ATM machines, mini-market), and satisfaction with washroom facilities – will influence South African students’ loyalty to residential housing.

4. Hypotheses development

4.1. Satisfaction with bedroom environment

“Satisfaction with bedroom” refers to the extent to which the bedroom atmosphere of the students’ housing fulfils their expectations. Students expect the bedroom environment of their residences to provide them with privacy and comfort for relaxation (Wells & Harris, 2007; Rechavi, 2009; Campagna, 2016). The extent to which the bedroom spaces of students’ residences fulfil their expectations will determine their satisfaction with the residence and their loyalty to it. Prior studies found a significant and positive relationship between students’ satisfaction with their residence and their loyalty (Wells & Harris, 2007; Rechavi, 2009; Campagna, 2016). Other research studies on the relationship between students’ satisfaction and loyalty found that satisfaction with the bedroom atmosphere is significant and positively related to students’ loyalty to their accommodation (Kaya & Erkip, 2001; Amole, 2009; Najib et al., 2011). Based on the evidence presented above, the following hypothesis is formulated:

H1: Satisfaction with the bedroom environment has a positive impact on students’ loyalty to residential housing providers.
4.2. Satisfaction with building quality

“Satisfaction with building quality” refers to the expectations that students have that their residential housing will provide a quality dwelling (Husin et al., 2015). Students anticipate that building quality features such as fittings, environment, workmanship, building design, and the presence of a kitchen and balcony will meet and/or exceed their needs and expectations (Ugutu, 2013; Husin et al., 2015). The extant literature found building quality features to have a significant and positive relationship with students’ loyalty to their residential housing (Amole, 2009; Ugutu, 2013). The above arguments lead to the following hypothesis:

H2: Satisfaction with building quality features has a positive impact on students’ (tenants) loyalty to residential housing providers.

4.3. Satisfaction with washroom facilities

Students who stay in residential housing expect that washroom facilities, such as the bathrooms and laundry, will satisfy their needs and expectations. The extant literature on student satisfaction with student housing facilities found that bathrooms and laundry rooms have a significant and positive impact on students’ satisfaction with and loyalty to their residences (Amole, 2005; Amole, 2009). A study by Najib et al. (2011) found that students in Malaysia were generally satisfied with the washroom facilities, thus influencing their loyalty to residential housing. These findings highlighted
the predictive power that washroom facilities have on students’ satisfaction, and therefore on loyalty to their residential housing. Based on these arguments, this study hypothesizes that:

**H3:** Satisfaction with washroom facilities has a positive impact on student loyalty to residential housing providers.

**4.4. Satisfaction with support services**

The extant literature found support services to have a positive impact on students’ satisfaction with and loyalty to residential housing. Support services in this study comprised parking space, a security system, cafeteria, ATM machines, mini-market, lifts, stairs, electricity and water supply, garbage disposal, and fire safety (Ugutu, 2013; Najib et al., 2011). The various attributes of the support services affect students’ satisfaction with their housing at different levels, depending on their level of importance to the students (Husin et al., 2015). Overall, Najib et al. (2011) found that students were satisfied with support services. Thus, the strength of the overall satisfaction with support services determines the strength of students’ loyalty to student housing. Based on the above argument, this study’s hypothesis is:

**H4:** Satisfaction with support service facilities has a positive impact on student loyalty to residential housing providers.

**4.5. Satisfaction with leisure room services**

Previous researchers found leisure room facilities to have an influence on students’ satisfaction with and loyalty to student housing, although on lower levels of significance (Amole, 2009; Campagna, 2016). Leisure room facilities include TV, computer, reading and common rooms, as well as balconies. Leisure room facilities meeting students’ expectations increase the students’ levels of satisfaction with and loyalty to the residence (Wells & Harris, 2007; Rechavi, 2009; Campagna, 2016). The opposite is also true when students are not satisfied with such facilities. Based on the above argument, this study hypothesizes that:

**H5:** Satisfaction with leisure room facilities has an impact on overall student loyalty to residential housing providers.

**5. Methods**

**5.1. Measurement**

This study used multi-item scales to measure the constructs, as adapted from Amole’s (2009) study of residential satisfaction in Nigerian universities. Four items were used for each construct, using a five-point Likert scale ranging from 1 “Strongly disagree” to 5 “Strongly agree.” Two professors from the marketing department assessed and approved the adapted measurement instrument for content validity. Thereafter, a pilot test was conducted with 30 respondents who were collected through convenience sampling, and minor corrections arising from the pilot were effected in the final draft of the instrument.

**5.2. Data gathering**

Data were obtained, through convenience sampling, from South African students aged 18 years and above in tertiary institutions in Johannesburg (Braamfontein area), using paper-based questionnaires in October 2019. Trained research assistants (fourth-year bachelor’s degree students) approached students with copies of the printed questionnaires, after which they introduced themselves, the purpose of the study, and the ethical measures being implemented to ensure respondents’ confidentiality, anonymity, and right to withdraw from the study without any reprisals. Potential respondents were assured that participation was voluntary. Those who were willing to participate were given a copy of the questionnaire to complete. Four hundred and forty-three (443) usable questionnaires were obtained for analysis.

**5.3. Common Method Analysis**

To assess the impact of common method variance in the data, the Harman’s one-factor test was conducted to ascertain whether a single factor accounted for most the correlation in the relationship between the outcome and the independent variables. After conducting this factor analysis, all the 21 items and 6 factors with eigenvalues greater than 1 emerged, with 27.46% being the highest.
percentage of variance accounted for by a single factor. Given that this is lower than the 50% generally recommended threshold, it implies that no single factor accounted for more 50% of the variance, thus it is concluded that common method variance did not present a serious problem to the present study.

5.4. Data analysis and results

A variance based structural equation modelling technique – partial least squares (PLS) – was used to analyze the data to assess measurement validity, and to test the research model to determine the significance of the hypotheses. The PLS analysis was conducted by means of the SmartPLS 3.2.8 software (Ringle et al., 2015).

5.5. Measurement model analysis

The measurement model was first assessed to validate the measurement items. In validating the measurement model, convergent and discriminant validities were examined. Convergent validity was examined using standardized indicator factor loading, composite reliability, and average variance extracted (AVE). Convergent validity is confirmed with standardized factor loading if it is significant and exceeds 0.708; the composite reliability should not be less than 0.7; and the AVE should be greater than 0.5 (Hair et al., 2020). The initial analysis showed that one item was dropped for each of the following constructs, satisfaction with bedroom, satisfaction with support facilities, and loyalty because they did not meet the 0.708 factor loading threshold. The measurement model was then reassessed. The results showed that all the factor loadings were significant (at p<0.001) and exceeded the 0.708 threshold. The results further showed that composite reliabilities exceeded the 0.70 threshold, with satisfaction with the bedroom being the lowest at 0.812. Moreover, the AVEs for all the constructs exceeded the 0.5 cut-off point. Together, these results validated the convergent validity of the measurement model.

| Table 3 |

Convergent validity of the measurement model

| Construct                          | Loading | Cronbach's alpha | Composite reliability | Average variance extracted (AVE) |
|-----------------------------------|---------|------------------|-----------------------|---------------------------------|
| Satisfaction with building quality | 0.805   | 0.873            | 0.632                 |                                 |
| SLBQF1                            | 0.794   |                  |                       |                                 |
| SLBQF2                            | 0.819   |                  |                       |                                 |
| SLBQF3                            | 0.834   |                  |                       |                                 |
| SLBQF4                            | 0.728   |                  |                       |                                 |
| Satisfaction with leisure facilities | 0.831  | 0.855            | 0.902                 | 0.696                           |
| SLLRF1                            | 0.831   |                  |                       |                                 |
| SLLRF2                            | 0.874   |                  |                       |                                 |
| SLLRF3                            | 0.825   |                  |                       |                                 |
| SLLRF4                            | 0.807   |                  |                       |                                 |
| Satisfaction with support facilities | 0.739  | 0.852            | 0.657                 |                                 |
| SLSSF1                            | 0.803   |                  |                       |                                 |
| SLSSF2                            | 0.833   |                  |                       |                                 |
| SLSSF3                            | 0.794   |                  |                       |                                 |
| Satisfaction with washroom facilities | 0.764  | 0.849            | 0.585                 |                                 |
| SLWF1                             | 0.771   |                  |                       |                                 |
| SLWF2                             | 0.801   |                  |                       |                                 |
| SLWF3                             | 0.748   |                  |                       |                                 |
| SLWF4                             | 0.739   |                  |                       |                                 |
| Satisfaction with bedroom         | 0.656   | 0.812            | 0.591                 |                                 |
| SSB1                              | 0.830   |                  |                       |                                 |
| SSB2                              | 0.712   |                  |                       |                                 |
| SSB4                              | 0.759   |                  |                       |                                 |
Discriminant validity was confirmed using the heterotrait-monotrait ratio of correlations (HTMT) (Henseler et al., 2015). According to this criterion, discriminant validity is confirmed if the HTMT estimates are below 0.85 or 0.90. The results obtained for this study are presented in Table 4. According to the results, all the HTMT estimates were below the 0.85 limit, thus providing support for the discriminant validity of the measurement model.

### Table 4

Discriminant validity using the HTMT criteria

|       | 1     | 2     | 3     | 4     | 5     | 6     |
|-------|-------|-------|-------|-------|-------|-------|
| 1 Loyalty | 0.821 | 0.893 | 0.737 |
| TSFL3  | 0.818 |
| TSFL1  | 0.872 |
| TSFL2  | 0.884 |

Source: own study.

5.6. Hypotheses testing

Before testing the hypotheses, the threat of collinearity between the exogenous constructs was examined using the variance inflation factors (VIF). The results showed that, for all the constructs, the VIF values were below the critical threshold of 3, thus suggesting that collinearity was unlikely to be a problem. The results of the structural model and the hypotheses have been presented in Figure 2 and Table 5.

The results show that the students’ satisfaction with the bedrooms was not significantly related to loyalty to their housing ($\beta=0.065; p>0.05$); therefore, H1 is not supported. However, their satisfaction with building quality ($\beta=0.163; p<0.01$), leisure facilities ($\beta=0.165; p<0.01$), support facilities ($\beta=0.136; p<0.01$), and washroom facilities ($\beta=0.154; p<0.01$) were all significant and positively associated with loyalty to their housing (all with small effect sizes), thus providing statistical support for H2, H3, H4, and H5.

Regarding the control variables, the results show that two of the four control variables were significant. Specifically, students’ age is significant and negatively related to their loyalty to their student residences ($\beta=-0.147; p<0.01$), while gender was significant and positively related to their loyalty ($\beta=0.095; p<0.05$). However, the students’ province of origin ($\beta=-0.005; p>0.05$) and year of studies ($\beta=0.052; p>0.05$) were not significantly related to their loyalty to housing.

### Table 5

Hypotheses analysis and effect sizes

| Hypo  | Relationship                        | Beta  | Std. error | $\chi^2$ | Effect size |
|-------|-------------------------------------|-------|------------|---------|-------------|
| H1    | Satisfaction with bedroom → Loyalty | 0.065* | 0.053      | 0.004   | No effect   |
| H2    | Satisfaction with building quality → Loyalty | 0.163** | 0.054      | 0.025   | Small       |
| H3    | Satisfaction with leisure facilities → Loyalty | 0.165** | 0.054      | 0.026   | Small       |
| H4    | Satisfaction with support facilities → Loyalty | 0.136** | 0.050      | 0.018   | Small       |
| H5    | Satisfaction with washroom facilities → Loyalty | 0.154** | 0.051      | 0.021   | Small       |
### Controls vs. Loyalty

| Control            | Coefficient | Standard Error | t-value | p-value | Effect Size |
|--------------------|-------------|----------------|---------|---------|-------------|
| Age                | -0.147**    | 0.050          | -2.946  | <0.01   | Weak effect |
| Gender             | 0.095*      | 0.042          | 2.284   | <0.05   | Weak effect |
| Province           | -0.005ns    | 0.041          | -0.124  | 0.90    | No effect   |
| Year of study      | 0.052ns     | 0.051          | 1.074   | 0.30    | No effect   |

*p<0.05; **p<0.01; ***p<0.001, ns Not significant (p>0.05)

Source: own study.

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![Research model with path coefficients](image)

**Fig. 2.** Research model with path coefficients. *Source: own study.*

### 6. Discussion and implications

#### 6.1. Findings

The findings of this study confirm that students’ satisfaction with four residential housing attributes (building facilities, washrooms, support services, and leisure room services) have a positive influence on their loyalty to a given place of residence. These findings corroborate those in the existing literature. This present study’s findings of the significant relationship between building quality and students’ loyalty to residences is consistent with the findings of Amole (2009), who found a positive relationship between building quality and loyalty to residences among students in Nigerian universities. Similarly, Amole’s (2005 and 2009) studies in Nigeria support this study’s findings on the relationships between washroom facilities and students’ loyalty to their dwellings. The findings on the
relationships between two satisfaction attributes (support services and leisure room facilities) and student loyalty to student housing are also supported by the extant literature (Amole, 2009; Husin et al., 2015).

Surprisingly, the results of the study found no significant relationship between students’ satisfaction with their bedroom environment and loyalty to their residence. This finding is inconsistent with findings in the available literature (Amole, 2005; Amole, 2009), which has identified students’ satisfaction with their bedroom environment as a positive predictor of their loyalty. A possible explanation of this is that Amole (2009) was investigating four overcrowded student housing establishments in Nigeria, making issues of privacy, social density, and security in the bedroom more important than they were in the current study. This observation thus provides opportunities for future studies to find out which other residential housing attributes or contexts have larger effects on loyalty.

This study highlighted the importance of the above-mentioned attributes in predicting students’ loyalty towards student housing, which the managers and providers of student housing should consider extensively when developing such properties. The findings also confirmed Amole’s (2009) argument that residential satisfaction, and therefore loyalty, was predicted mainly by those attributes that catered to the students’ basic needs.

For the control variables (age, year, gender, area of stay and year of study), age and gender showed positive but small effects on student loyalty. The other two controls showed no effect. These findings suggest that loyalty does in fact increase with the student’s age, as supported by Amole’s (2009) study, which found that the length of stay – and therefore age – were predictors of student satisfaction with residential housing in Nigerian universities. This was to be expected, as students who are satisfied with a residence tend to develop loyalty and stay longer in the same housing (Rent & Rent, 1978; Peck & Stewart, 1985; Amole, 2009).

6.2. Implications of the study

The findings of this study have academic and management implications. First, they contribute to the literature on student accommodation by delineating how students’ satisfaction with various aspects of student residences predicts their loyalty to the residence. These can include students’ word of mouth about the residence, as well as their willingness to pay higher premiums in the future.

Second, the level of competition in the housing market is too high for managers to ignore these findings. Learning from and incorporating these findings into their strategies could help student-housing providers to create and sustain strong levels of loyalty among students in regards to their properties, thus reducing vacancy rates. Providers and managers of student housing should also enhance safety features – for example, by increasing the quality of the materials used, and carrying out regular maintenance on the properties. Student housing management should also respond to student bedroom needs to increase levels of privacy, safety, and choices of bedrooms.

As age and gender significantly relate to students’ loyalty to their accommodation, future related studies need to consider the variables they use. Moreover, developers and managers of student accommodation need to be aware that age and gender may be instrumental in building students’ loyalty to their accommodation services and should put measures in place to address the levels of needs exhibited by these groups. Addressing such issues would increase not only occupancy rates, but also future profitability for housing providers.

6.3. Limitations and recommendations for further studies

This study examined the influence of satisfaction factors (bedroom environment, building quality, washroom facilities, support services and leisure room services) on student loyalty towards student housing. Only these five (5) attributes were examined in relation to students in South Africa, who lived in the Braamfontein area. No distinction was made between on- and off-campus students. Other issues that were not covered, relating to the importance of the location of the student housing or the dwelling type (on-campus, off-campus, accredited and non-accredited), can be considered in future studies. A similar study could also be carried out in different contexts to test its relevance, such as a different form of housing (e.g., low-cost rental in townships), a different province or country, by type of residence, and so on.
7. Conclusion

The current study used existing literature to formulate a model to evaluate students’ satisfaction with residential housing at tertiary institutions. The main aim was to determine the relationship that satisfaction dimensions (bedroom environment, building quality, washroom facilities, support services, and leisure room facilities) have with student loyalty to their residences. The results of this study showed that all but satisfaction with the bedroom environment were significant in predicting student loyalty to their residences.

It also emerged from the results that control attributes such as age and gender had positive and significant relationships with student loyalty, implying that residence management needs to pay attention to these attributes in their planning. It also implied that future research would need to pay attention to these attributes as predictors of loyalty to residential housing. Overall, the study has proved that students’ satisfaction with residential dimensions has a positive and significant impact on their loyalty to residential housing.

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