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STUDENT HOUSING REQUIREMENTS IN NEAR CAMPUS NEIGHBOURHOODS: A CASE STUDY OF SAMARU ZARIA, KADUNA STATE, NIGERIA

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Studies on the relationship between students' influx into near-campus neighbourhoods had focused on the negative impacts of studentification on the neighbourhoods, established residents and conversion of single-family housing into houses for multiple occupancy (HMO). But there has been limited understanding on the housing preference of students in near-campus neighbourhoods or how best to absorb the student population in these neighbourhoods. To this end the study attempts to highlight the housing needs of students in Samaru near-campus neighbourhoods (North-West Nigeria) using the Student Accommodation Preference Index (SAPI) instrument also considering neighbourhood attributes that would affect their housing needs. A questionnaire survey was used as means of data collection. 118 questionnaires were distributed and 109 were retrieved and analysed using SPSS V.21. results are presented in form of means (M), Relative Agreement Index (RAI) and Percentages. A reliability test was done to test the viability of the instrument for the study which was found to be reliable. Results show that the housing need of students were private room, bath, small fridge, kitchen, laundry, dry area, fire protection system, gated house, common room and waiting area. It also showed that provision of Automated Teller Machine (ATM) points, hospital, places of worship, recreation areas and bus park amongst others will improve quality of life of students within near-campus neighbourhoods. The findings are pertinent to design professionals, architects, planning authorities and developers as it gives insights on the housing needs of students which is helpful for effective planning and zoning of student housing within near-campus neighbourhoods.

Keywords: near-campus neighbourhoods, student housing preference, studentification

INTRODUCTION

The historical background of studentification dates to the early 2000s, it is defined as an ''influx of students within privately-rented accommodation in particular neighbourhoods'' (Smith., 2005 Munro et al., 2009). This significantly changes the

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residential profile and tenure system in such neighbourhoods, leading to the emergence of student areas where owner occupier housing stock deteriorates through conversion to private rented Houses for Multiple Occupancy (HMO) (Smith and Hubbard, 2013). These environmental changes resulting from increased student influx in these once quite neighbourhoods manifest its unpleasant effects in diverse ways ranging from; resentment towards students by residents; increased property prices; increased crime rates; neighbourhood deterioration; loss of social cohesion and character; pressure on infrastructure and a host of other menace (Allison, 2006; Anderson, 2013; Donaldson, 2014: Kinton, 2013; Smith and Hubbard, 2013). This, therefore, begs for the question of how near-campus neighbourhoods could be designed to thrive and foster social cohesion between student population and resident population. Studies shows that sociospatial segregation i.e. the formation of exclusive student area and resident area is in constant collision with the aspirations of maintaining social cohesion and acceptance of diverse social groups within communities (Dorling et al., 2008; Lees, 2009).

Munro et al. (2009) highlights that to date, student population have been neglected within social segregation discusses despite studies that shows that student gravitate to near-campus neighbourhoods due to insufficiency of on-campus accommodation, activities of landlords, developers, agents and above all their need for privacy (Anderson, 2013 Donaldson et al., 2014). It therefore, becomes vital to relate the trends in students housing supply in these neighbourhoods to their actual housing needs and preferences as the students have a distinct lifestyle and culture which should be reflected in their housing design. The study therefore aimed at understanding student housing needs and preferences in a bid to mitigate the effects of studentification. The following objectives were used to achieve the aim of the study: (1) Identification of students' spatial requirements in near campus neighbourhoods from literature. (2) Establishing housing requirements of students in Samaru near-campus neighbourhood. The study literature is organized into three subsections to capture (1) The concept of studentification, (2) Investigate how to integrate students in near-campus neighbourhoods (3) Identify student housing needs. Following the introduction, the second section provides the review of related literature, research methodology, results and discussions and finally conclusions and recommendations. The paper proceeded through four sections.

REVIEW OF LITERATURE

Studentification

Zhang et al. (2012), identified that the urban space is in a constant state of change which may tend towards its' growth or deterioration. Studentification happens to be a key influence on the changes seen in university towns as it does not occur in vacuums but in urban spaces (Boersma et al., 2013). It is vital to note that the manifestation of studentification and its corresponding effects on its host communities may differ from place to place as it is affected by a number of underlying factors: cultural, religious, political and various role-players. Hubbard, (2006) identified six role-players: students, higher education (HE) institutions, local authorities, developers, home owners and permanent residents. Then Munro et al., (2009) gave a brief description of the profile of a typical HE student to be a young individual, without dependents, usually from a middle-class background, brought-

up to be relatively well mannered. But this population are also associated with experiencing freedom from guardians, rules and regulations for the first time hence are inclined to explore the lengths and breadths of that freedom (Smith and Holt, 2007: 152; Smith, 2007; Munro et al., 2009).

Students who study away from their hometown require accommodation for the duration of their study and studies show that majority of full-time students' study away from home (Ackermann and Visser, 2016; Duke-Williams, 2009). This results in two main events that are likely to occur. They may either reside in accommodation provided by universities termed as self-segregated university halls of residence or in privately provided accommodation in near-campus neighbourhoods alongside established residents. Ahmadu Bello University with above 40,000 full time students, accommodates about 12,000 students which is 30% of its population, this coincides with the national policy within Nigeria requiring tertiary institutions to accommodate at least 30% of her students (Sagada, 2009; Student Affairs Division ABU Zaria, 2017). This leaves an approximate total of 28,000 students seeking refuge in the arms of private investors in near-campus neighbourhoods taking advantage of the niche market (Sage et al., 2012). Johannesburg Municipality (2009) defined a student house as a habitable room rented out for extended periods of time to unrelated students who share communal facilities such as kitchen, lounge, dining room and bathroom. Kenna (2011) then classified student housing in near-campus neighbourhoods into two categories: namely, housing in multiple occupation (HMO) and purpose-built student housing. While living alongside other social groups could be beneficial to the students, their presence could be seen to trigger resentment if resident perceive they are becoming the minority social grouping (Rugg et al., 2004; Alisson, 2006). The concerns of studies pertaining to studentification is not limited to the fact that near campus neighbourhoods have become home to students but is tied to the array of negative effects rising from concentration of student population within neighbourhoods, ranging from: neighbourhood deterioration, demographic imbalance, increase crime and property prices, pressure on infrastructure and social decadence emanating from the proliferation of HMOs and large student numbers (Munro et al., 2009; Smith and Holt, 2007; Murtagh, 2011). Sadly, little or no studies have gone into understanding the concept of studentification in the Nigerian Context or housing needs of students in near-campus neighbourhoods and that is the gap this study intends to fill.

Integrating students into near-campus neighbourhoods

There has been an observed surge in the supply of student accommodation in near-campus neighbourhoods typically taking form of conversion of owner-occupied family housing to HMOs. This was due the observed accommodation dearth in universities and student housing demands as there was absence of national policies governing the strategic development of student accommodation or regulating the conversion of owner-occupied family housing to HMOs (Hughes and Davis, 2002) the landlords of HMOs became the main providers of student accommodation in near-campus neighbourhoods (Hubbard, 2008). Based on analysis carried out by (Smith and Hubbard, 2013) it was found that 40 towns and cities in the UK had at least one ward with 10 percent or more of full-time students living in shared rented housing. More recently it claimed that 730,000 students (51% of the total population) resided in HMO (King Sturge, 2008). Smith, (2005)

identified the markers of studentification to be evidently seen in reconfiguration of local shops and services to student oriented markets including closing down of schools (crèche, primary and high school) leading to lower family appeal of the neighbourhood and also disputes arising from night noise nuisance, overspill of refuse and littering, untended gardens, vandalism, hooliganism and increased property prices which causes inflationary pressures evident across a range of housing market (Garmendia et al., 2011; Kenna, 2011; Sage et al., 2013; Smith, 2008). Between 2003 to 2008 specific towns in London experienced rise in house price growth due to the presence of one or more universities within the region. With a changing market and increased interest in student housing it made such neighbourhoods unfavourable for young households and first-time buyers (Adams et al, 2009). This is a case where student housing distorts the existing housing market, act as gentrifiers and displace established household from studentified neighbourhoods (Wyly et al., 2010). From studies to absorb student population into near-campus neighbourhoods is done in two ways either in HMOs or PBSH which is seen to have different effects on the environment in which they are situated (Ackermann and Visser, 2016) with the later identified to be more favourable to host neighbourhoods (Hubbard, 2009). HMO student housing is described as a traditional single-family house with a front garden and a backyard which accommodates university students. In this setting students usually have their own rooms and share communal facilities like kitchen, bathroom, and living room (Garmendia et al., 2011).

In Nigeria HMOs have a slightly different setting usually they have up to three typologies: it could comprise of a compound accessed from a small gate with single rooms access from a courtyard. In this type of HMO, the owner dwells with the students in a separate one or two-bedroom apartment. The only shared facility for the students is the bathroom usually located at the extreme end of the house to avoid odour. Students living in this type of housing are expected to cook in their rooms. The second case is where self-contain rooms are designed either alongside a landlord's house within the same compound or could be non-owner occupier. In this case the only shared facility is the access through a courtyard and the third typology is one in which the house formerly family oriented one- or two-bedroom apartments are rented to students who have shared living room, kitchen and bath. In all these cases there is little or no consideration to landscaping or neighbourhood outlook.

Based on the resistance from residence towards students living in near campus neighbourhoods and the continuous demand for accommodation by students, it led to the rapid development of blocks of PBSH. PBSH developments are usually all-inclusive complexes having a bedroom ensuite with bathroom and kitchens, providing students with facilities like parking, laundry, gym, fitness centre, swimming pool, coffee and wine bar; high level of surveillance; 24/7 security and convenience store located in specific areas close to universities (Davidson and Lee, 2010). Sage et al., (2013) identified PBSH as a recession proof investment venture as the number of students are on the increase which makes it remain a viable business venture for investors and developers. PBSH have experienced a surge in South Africa e.g. Uniloft and Campus Key in several cities in South Africa. A number of establishments have been seen identified as pioneers in provision of PBSH in the UK such as UNITE (38,300 bed spaces in 23 cities), University Partnership

Programme (UPP) (20,000 in 10 cities), Liberty Living (15,000 in 17 cities) and Derwent Living (3500 in 8 cities). In many senses, the production of student housing is indicative of how politics relies upon sociospatial segregation to create opportunities for capital investment (Macleod, 2002). This information establishes the viability of student housing scheme in near-campus neighbourhoods as a lucrative business which has been seen to be recession resistant. PBSH is also seen as a remedy to mitigate the effects of studentification and foster neighbourhood revitalization and regeneration (Sage et al, 2013). Although, minimal studies have been seen to capture the spatial requirements of students living in studentified neighbourhoods in a bid to better cater for students housing needs in the Nigerian context and study area.

Student housing preference

Student accommodation is perceived as an essential component of tertiary institution and seen as an important parameter for the choice of an institution by guardians as the environment they live and learn affect general performance of individuals (Kolawole and Boluwatife, 2016). The provision of adequate and comfortable accommodation has been tied to academic success, retention rates and satisfaction by quite a number of scholarly works (Onclin, 2014). Tertiary institutions are saddled with the responsibility of providing accommodation for its students but due to the increase in student enrolment which is not commensurate to the available accommodation more students are not catered for, hence, they rely on privately provided accommodation usually in close proximity to the institution. Matters pertaining to students' choice of accommodation should not be disregarded due to its crucial influence on the living satisfaction and academic pursuit of students (Zotovie, 2017). Ubong, (2001) observed that although student housing accommodation may be seen as a management issue the user preferences and choices are to be considered as upon satisfaction a design project is seen to be successful. Adu-Gyanfi et al., (2014) defined accommodation as a place to live which is rented over a period of time of pursuing a degree in a university as well as other services enjoyed during this time, this could be situated within or outside the campus (Owolabi, 2015). Many studies have discussed factors that affects students' accommodation preferences. Roche et al., (2010) examined housing preferences of undergraduate students and the findings showed that the students were inclined to stay in a housing that promotes privacy and provided adequate amenities. Moore, (2000) found that the factors that influenced student housing preference were privacy, noise influence and sharing of bed space which is associated with on-campus accommodation. Price of housing, proper layout, convenience and security are key influences on students housing preference (Wang and Li, 2006). Khozaei et al., (2010) identified security, proximity to school, room size, facilities and amenities as factors that affect student accommodation preference. Furthermore, (Khozaei et al., 2011) developed a 64-variable instrument under six categories called the student accommodation preference index (SAPI) instrument. The six categories are namely: facility and amenity, visual, convenience of student' s room, location, social contact and security. The instrument was designed on the bases that student want to live in houses that bear resemblance to their homes which was to be used as an instrument to measure student housing preference and satisfaction suitable for use in several fields of study like architecture, planning amongst others. On observation that the instrument was

lengthy it was reviewed and a 29 variable under six categories instrument was tested for reliability and validity. The six categories were: facilities and amenities, visual, convenience of the room, location, social contact and security. These constitute the main variables for this study. facilities and amenities have (5 items), visual (7 items), convenience of the room (5 items), location (4 items), social contact (3 items) and security (4 items). Facilities and amenities included 24hour study rooms, indoor pools (especially for women), fitness rooms, ATMs and storage rooms. Visual preferences included a beautiful exterior and facade, a new or newly renovated building, proper natural and artificial lighting in students' rooms, attractive interior in students' rooms, new or good-condition furniture in students' rooms, modern and stylish furniture in students' rooms, and beautiful and stylish furniture in the TV room and other social spaces. The dimension of room convenience consisted of 5 items: mini refrigerator in the room, air conditioner in room, the ability to move furniture and redecorate the room, the potential to divide the room into studying, eating and sleeping spaces, and underbed space that could be used as storage. The location aspect included the following items: proximity to the bus stop and university. The social contact aspect consisted of 3 items: a double shared room, a large area for students to gather, and a sitting room for every few rooms. Finally, the security aspect included the following: requires card access to enter the residence hall, requires card access to enter the room, room doors equipped with viewing devices, and 24-hour security. other factors identified from literature that affect student housing preference were size of place of residence (Tremblay et al., 1980), functional congruity (Sirgy et al., 2005) and neighbourhood attributes (Wang and Li, 2006). Other factors in residence housing preferences include outdoor environmental quality (Jim and Chen, 2007), location (Thamaraiselvi & Rajalakshmi, 2008; Karsten, 2007), local landscape (Nasar, 1983), safety, and proximity to the city, public transportation, proximity to workplace, sense of safety, medical and health facilities, and educational facilities (Wu, 2010). Mohit et al., (2010) conceptualized the factors that would influence residential neighbourhood satisfaction into three categories namely; public facilities with 9 variables; social environment with 5 variables; and neighbourhood facilities with 12 variables.

Public facilities play an important role in producing housing quality and hence, these should be incorporated in residential satisfaction. The variables included in this component are: open space, play area, parking, prayer and multi-purpose halls, perimeter roads, pedestrian walkways, public phone, local shops and food stalls. Social environment which are likely to impact housing satisfaction include variables such as noise, crime, accidents, security and community relations. Neighbourhood facilities influence residential satisfaction in many ways, because they refer to the position of the housing area with respect to work place and other facilities such as distances to town centre, school, police station, hospital, market, shopping centres, public library, religious building, LRT, bus and taxi stations.

METHODOLOGY

The paper is based on the case study of Samaru near campus neighbourhood in Zaria opposite Ahmadu Bello University (ABU) main campus Zaria, Kaduna State, Nigeria. This neighbourhood was chosen for the study because of its proximity to the university and the characteristic changes observed in its general outlook

caused by uncontrolled influx of students due to accommodation issues in the university (Sagada, 2009). The case study design was used for the study because it is associated with a particular phenomenon in the area. Furthermore, the researcher had little control over events and the focus was addressing the issue of studentification by understanding the housing needs of students to mitigate the effects of studentification in a real-life context. The use of multiple sources of evidence makes case study design an acceptable research design (Creswell, 2007). Primary and secondary data were used for the study. Questionnaire survey approach was adopted. Primary data were collected with the aid of questionnaire. Questionnaires were administered to students of ABU residing in the study area, to understand their housing need in near-campus neighbourhoods. Secondary data was obtained from books, journals and paper related to the study. Simple Random sampling was used a means to distribute the questionnaires within the study area. This was done by area within Samaru neighbourhood as it had four distinct areas namely: Hayin Dogo, Hayin Danyaro, Danraka and Samaru Market in order to select samples for the questionnaire survey. The sample size of the study was 118 based on sample size of similar studies (Olugbenga and Muyiwa, 2012; Sen and Antara, 2018; and Sekaran, 2003). The researchers had to use sample size based on other studies of this sort which was 80-100, because data on the number of students living in Samaru near campus neighbourhood was non-existent. The questionnaires were then distributed based on proximity to school in relation to the areas and student population within the areas as it was found that the farther away the areas were from school the lower the population of students as the students saw proximity as a key determinant of their housing preference. A total of 118 questionnaires were distributed randomly in this proportions 15 to Hayin Dogo 10 retrieved, 28 to Samaru Market, 30 to Hayin Danyaro 29 retrieved, and 45 to Danraka 42 retrieved, this gives a total of 109 retrieved questionnaires which were used for analysis. The questionnaire design was a five scale Likert design from 1 to 5 from not important (1), slightly important (2), Neutral (3), Important (4) and Very important (5). It was categorized into three sections: one demographics of students; two the level of importance of housing attributes to students and the three the level of importance of neighbourhood attributes to the students. The responses (N) from the questionnaire were analysed using statistical package for social science (SPSS) and the results were presented using Means (M), Relative Agreement Index (RAI) and percentages on tables.

$$M = \frac{\Sigma fx}{n} \quad \text{and RAI} = \frac{\sum w}{AN} = \frac{5n5 + 4n4 + 3n3 + 2n2 + 1n1}{5N}$$

Where: M= mean, f = frequency of each class, x =mid-interval value of each class and n = total frequency

Where w is the weighting given to each factor by the respondents, ranging from 1 to 5. For example, n1=No. of respondents for not important, n2= No. of respondents for slightly important, n3= No. of respondents for neutral, n4= No. of respondents for important, n5 = No. of respondents for very important. A is the highest weight (i.e. 5 in the study) and N is the total number of respondents. The relative agreement index ranges from 0 to 1 for formula see (Somiah et al., 2015).

FINDINGS AND DISCUSSION

Demographic Profile

Ahmadu Bello University students residing in Samaru neighbourhood are predominantly male (68%) and females (28%) they are single, prefer to stay with students than residents and prefer off-campus housing due to their need for privacy. Convened upon the demographic information in (Table 1) the student populace comprised of more undergraduate than postgraduate students, who are mostly within the age range of 21-25years (43%) and have relatively good academic performance with a second-class lower class of degree (34%). More students operate on a rent-based tenure system, have stayed there for at least 2years, get 10,000-20,000-naira stipends monthly and can afford to stay in houses well above 120,000 naira (38%). These results shows that guardians are willing to pay for a comfortable living environment for their Students to further enhance their learning experience. The result also concurs with the profile of students identified by (Munro et al., 2009, Sen and Antara, 2018, and Khozaei et al., 2012) that there are relatively younger people in schools for undergraduate and postgraduate programs.

Table 1 Respondents' Profile

Variable	Category	N	%	Variable	Category	N	%
Gender	Male	74	68%	Marital Status	Single	83	76%
	Female	31	28%		Married	6	6%
Age	Below 16	1	1%	Monthly Stipend	Below 10,000	14	13%
	16-20	38	38%		10,000-20,000	37	34%
	21-25	47	43%		21,000-30,000	20	18%
	26- 30	16	16%		31,000-40,000	12	11%
	31-35	3	3%		Above 40,000	8	7%
	Above 35	4	4%				
Student Leve	Undergraduate	79	72%	Current Annual Rent	Below 30,000	15	14%
	Postgraduate	19	17%		30,000-60,000	27	25%
Tenure System	Rented	89	82%		61,000-90,000	3	2%
	Owned	2	2%		91,000-120,000	8	7%
	Stay with parent	7	6%		Above 120,000	38	38%
What is your CGPA	1.0-1.49 (Pass)	2	2%	Housing main attraction	Privacy	61	36%
	1.5-2.49(Third class)	9	8%		Amenities	8	7%
	2.5-3.49(Second Class lower)	37	34%		Responsibility	10	9%
	3.5-4.49(second class upper)	24	22%		Location	26	24%
	4.5-5.0(First class)	24	2%		Room layout	2	2%
Length of stay Off-campus	Below 1 year	19	17%	Accommodation Preference	Campus studen Housing	9	8%
	1- 2yrs	49	45%		Campus private owned housing	7	6%
	3-4yrs	30	28%		Off campus with residence	23	21%
	5-6yrs	7	6%		Off campus witl students	67	61%
	Above 6yrs	2	2%				

Source: Authors fieldwork

Students Housing Attribute Preference

Table 2 Level of importance of Housing attributes

S/N	Factors	Variables	RAI	N	Sum	Mean	Ranking	Category Ranking
	Amenities	Laundry with washing machine	71%	108	388	3.59	18	3.62 (3rd)
		Dry area and tumble dryer	70%	106	383	3.61	17	
		Fitness room	69%	109	378	3.47	21	
		Fire protection system	85%	108	465	4.31	5	
		Onsite parking	69%	104	377	3.63	16	
		Swimming pool	52%	105	284	2.70	25	
		24-hour study	79%	106	429	4.05	10	
	Convenience	Kitchen	89%	109	487	4.47	2	4.25 (1st)
		Private room	83%	106	452	4.26	7	
		Private bathroom	86%	106	469	4.42	3	
		Ability to move furniture	74%	105	406	3.87	14	
		Indoor air quality	82%	103	446	4.33	4	
		Air conditioner in room	77%	106	421	3.97	13	
		Small sized fridge	79%	105	433	4.12	9	
		Storage space in room	83%	106	450	4.25	8	
	Visual	Landscaping/garden	70%	109	384	3.52	20	4.05 (2nd)
		Aesthetics of the building	76%	103	414	4.02	11	
		Modern style furniture	77%	105	422	4.02	11	
		Proper lighting	90%	106	493	4.65	1	
	Social	Waiting area in student housing	68%	105	372	3.54	19	3.21 (5th)
		Common room	74%	109	404	3.71	15	
		Double shared room	46%	1.5	250	2.38	26	
	Security	Card access to enter room	58%	105	318	3.03	23	3.37 (4th)
		Gated houses	86%	109	466	4.29	6	
		Thumbprint identification access	53%	105	291	2.77	24	
		Surveillance camera	66%	106	357	3.37	22	

Source: Authors fieldwork

Results in (Table 2) shows that the housing attributes that were most preferred by students were proper lighting (4.65), kitchen (4.47), private bath (4.42), indoor air quality (4.33), fire protection system (4.31), gated houses (4.29), private room (4.26), storage space in room (4.25), small size fridge (4.12) and 24-hour study (4.05). The other variables all ranked above significant of the study which is at 3.5 except for the following variables which was identified based on discussion with students and results from questionnaire to be their least preferred housing attributes: double shared room with (2.38), swimming pool (2.70), thumbprint identification access (2.77), card access to enter room (3.03), surveillance camera in room (3.37) and

fitness room (3.47). These results reflect the context of the study which is within northern Nigeria, as culture and religion are key influences on the way of life of the people. Hence attributes pertaining to privacy and convenience ranked highest. Studies have identified that presence of swimming pools, surveillance and fitness rooms as key features of student housing in near-campus neighbourhood in the UK (Davidson and Lee, 2010) but in this context they are seen as extravagant and unnecessary. Based on the mean ranking of each category under student housing attribute preference, the convenience category ranked highest with 4.25 followed by visual with 4.05, then facility and amenity had 3.62, security had 3.37 and social had 3.21. From this result the inferences made is that the housing needs of students in Samaru near campus neighbourhood is a self-contain paying attention to aesthetics, lighting (natural and artificial), landscaping and communal and social spaces within the design.

Students Neighbourhood Attribute Preference

Table 3 Level of Importance of Neighbourhood Attributes

S/No	Factors	Variables	RAI	N	Sum	Mean	Ranking	Category Ranking (M)
	Public Facilities	Children playground	54%	105	297	3.04	23	3.74 (3rd)
		Landscaping/ Recreation Parks	71%	106	389	3.67	19	
		Neighbourhood Center	66%	104	359	3.45	21	
		Cinemas	67%	107	363	3.39	22	
		Restaurants/Cafeterias	86%	105	466	4.44	5	
		Public Gym	72%	106	392	3.70	16	
		Local/Corner Shops	85%	106	462	4.36	8	
		Parking	75%	106	407	3.84	14	
	Social Environment	ATM	91%	107	494	4.62	1	3.96 (2nd)
		Police Station	77%	107	419	3.92	13	
		Fire Service	82%	106	448	4.23	10	
		Postal Agency	68%	107	370	3.46	20	
		Sport Complex (Golf Course, Swimming Pool)	71%	104	387	3.72	15	
		Waste Disposal Unit/ Recycling unit	86%	106	466	4.40	6	
	Neighbour-hood Facilities	Day-care to Secondary School	59%	105	319	2.83	24	4.07 (1st)
		Public Library and Book store	78%	106	423	3.99	12	
		Shopping Malls/ Market	80%	106	438	4.13	11	
		Service Industry	71%	104	385	3.70	16	
		Offices/ Banks	79%	98	429	4.38	7	
		Places of Worship (Churches & Mosques)	91%	107	494	4.62	1	
		Bus, Motorcycle, Tricycle Station	88%	107	478	4.47	4	
		Hospital	89%	107	486	4.54	3	
		Filling Station	72%	107	394	3.68	18	
		Proximity to School/ Work/Facilities	84%	105	456	4.34	9	

Source: Authors fieldwork

Results in Table 3 show that the neighbourhood attributes that would least influence student satisfaction within near-campus neighbourhoods is pre-tertiary schools ranging from day-care to secondary school which had the lowest mean of 2.83. others that ranked least were children playground with 3.04, cinemas with 3.39, neighbourhood centre with 3.45 and postal agency with 3.46 all having means less than 3.5. This result could be said to have been affected by technological advancements globally experienced and many delivery services in Nigeria today as neighbourhood attributes such as postal agencies are gradually fading away due to home delivery and a host of other platforms. Also, the result rightly showed that most students are single without dependents hence would not find the presence of pre-tertiary schools appealing within the neighbourhood. On the other hand, the neighbourhood attributes the students preferred most were: ATM and places of worship ranking highest with 4.62 means each, hospital with 4.54, bus park having 4.47, restaurants having 4.44, waste disposal unit had 4.40, offices and banks had 4.38, local/corner shops had 4.38, proximity to school had 4.34 and fire service station had 4.23. The other neighbourhood attributes had means well above 3.5 making them significant variables for the study. The result show what attributes should be strongly considered in the planning and zoning of near campus neighbourhoods as the presence of students in such neighbourhoods are inevitable. The cumulative ranking of the categories shows that neighbourhood facilities ranked highest with an average mean of 4.07, social environment ranked second with 3.96 and public facilities ranked third with 3.74.

Reliability of instruments

The instruments used for this study were a combination of student accommodation preference index (SAPI) instrument which captured student housing preference and neighbourhoods' attributes as conceptualized by Mohit et al., 2010. The variables under housing attributes and those of the neighbourhood attributes were tested for reliability using SPSS V.21 and the result of the test are described in the following tables. Reliability simply refers to the extent to which the variables of an instrument consistently serve as a reliable measure for a concept, i.e. the ability of an instrument to measure a concept. Cronbach Alpha and Intraclass Correlation Coefficient (ICC) are ways of measuring the strength of that consistency. The higher the value the higher the reliability and vice-versa, it ranges between 0 to 1 i.e. no reliability to perfect reliability which is rear. A Cronbach α and Intraclass Correlation Coefficient of 0.7 and above is considered to have strong reliability.

Cronbach α is represented mathematically as

$\alpha = \left(\frac{K}{K-1}\right)\left(1 - \frac{\sum_1^K = \sigma_{y_1}^2}{\sigma_x^2}\right)$ where

K refers to number of scale items

$\sigma_{y_1}^2$ refers to the variance associated with items

σ_x^2 refers to the variance associated with the observed total score

Student Housing Attribute Reliability Test

Tables 4 and 5 gives the reliability test results for the N=26 housing attribute variables used for the study. Based on the reliability test run the Cronbach alpha value is equal to the average intraclass correlation coefficient which is 0.843 this is above the 0.7 reliability margin which establishes that the SAPI instrument is suitable for the study of student housing preference in Northern Nigeria Ahmadu Bello University being one of the oldest Institutions in Nigeria and is a focal point for education discusses (standard and quality of education) in Northern Nigeria which was one of the criteria for selection of the case study.

Table 4: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.843	.847	26

Table 5: Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.171[a]	.126	.235	6.378	80	2000	.000
Average Measures	.843[c]	.790	.889	6.378	80	2000	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition-the between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Student Neighbourhood Attribute Reliability Test

Table 6: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.862	.867	24

Table 7: Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
		Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.206[a]	.156	.275	7.243	84	1932	.000
Average Measures	.862[c]	.816	.901	7.243	84	1932	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition-the between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

The results from Tables 6 and 7 show that the Cronbach α value and the average intraclass correlation coefficient is also equal, it is 0.862 also confirming that the neighbourhood attributed conceptualized by Mohit et al., 2010 is a viable tool for the measurement of the neighbourhood preferences of students in near-campus neighbourhoods in the Nigerian context.

CONCLUSION AND RECOMMENDATION

In conclusion the study aimed at understanding the housing requirements and preferences of students within near-campus neighbourhood in a bid to mitigate the effects of studentification. The study concludes that students' housing preferences within Samaru near-campus neighbourhood is affected by their need for privacy and convenience with key variables such as private room, bath, kitchen, laundry, proper lighting, indoor air quality, gated houses. Also, neighbourhood attributes that are most important to students are ATM, places of worship, bus station, proximity to school, waste management services, restaurant, local/corner shops and recreation areas. Students housing need is concluded to be a well thought out self-contain space with supporting facilities and amenities within the housing environment and in the neighbourhood. The reliability test run on the two instruments used for the study showed high reliability values of Cronbach α which was 0.843 and 0.862 for housing and neighbourhood attributes respectively. These results are important to design professionals, planning authority and major stake holders in off-campus student housing matters as it has established the instrument for measuring student housing and neighbourhood needs in near-campus neighbourhoods and gives a bases for the replication of this study in other region in order to identify a national archetype for the study of student housing in Nigeria. The study concludes that in the Nigerian context culture and religion is a strong determinant of students housing needs therefore this study could be tested in other regions to either confirm or negate this conclusion as this study is limited to northern Nigeria. It also provided design professionals with spatial requirements for effective planning and development of PBSH in near-campus neighbourhoods in Nigeria.

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