Engineering Management Research; Vol. 2, No. 2; 2013
ISSN 1927-7318 E-ISSN 1927-7326
Published by Canadian Center of Science and Education

Residents' Satisfaction with the Social Security and National Insurance Trust Housing in Ghana

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Received: May 20, 2013 Accepted: July 6, 2013 Online Published: September 4, 2013

doi:10.5539/emr.v2n2p29 URL: http://dx.doi.org/10.5539/emr.v2n2p29

Abstract

Housing is one of the three basic needs of mankind. Its performance should meet technical expectations as well as the overall satisfaction of end users. The aim of this study was to assess the service quality performance of the Social Security and National Insurance Trust (SSNIT) housing based on the perspectives of the occupants. The study employed questionnaire survey involving 747 flats in six administrative regions in Ghana selected using the quota and systematic sampling methods. The levels of satisfaction of the residents with the facilities, management of the SSNIT housing, social amenities and neighbourhood issues were examined, and data was analysed using descriptive statistics and the Relative Satisfaction Index (RSI). The findings showed that the level of satisfaction of residents are mixed. Residents are generally satisfied with the building features, social amenities and the neighbourhood, but dissatisfied with the management of SSNIT housing, especially in the areas of maintenance and accessibility to management. The need for SSNIT housing management staff to respond promptly to residents' request for routine maintenance, to adopt courteous behaviour and to understand the residents' specific requirements are recommended. The findings provide useful information for SSNIT housing management in Ghana as well as other real estate developers in Africa.

Keywords: residents, satisfaction, SSNIT, housing, Ghana

1. Introduction

Housing is a basic need and a necessity for the existence of man, and thus considered as one of the most important basic infrastructure in the development of every society (Bank of Ghana Report, 2007). Housing touches the lives of individuals as well as that of the nation; a great importance is therefore ascribed to the role it plays in engendering human comfort by both nature and society (Jiboye, 2010; Bank of Ghana Report, 2010). Fatoye & Odusami (2009) stated that one of the basic needs of man is shelter and the right to adequate housing is a universal right, recognized at the international level and in more than one hundred national constitutions throughout the world. In spite of this right, the 'homeless', 'the inadequately housed', and 'the evicted' are numerous in the cities and the countryside across the globe. About 25% of the world's population do not have any fixed abode and in African cities the housing shortage ranges from 33% to 90% (Zami & Lea, 2008). It is therefore not surprising that the United Nations (UN) estimates that about 3 billion persons will be living in slums by 2050 (UN Habitat, 2007). Since housing is an important national investment issue, and a right of every individual, the major aim of any housing development program is to raise the availability level in order to meet the demand of the growing population in any nation across the globe. Simply providing people with housing units do not measure the success of housing programs. Assessing and quantifying satisfaction with daily life have recently been topics of vibrant debate. An individual's life satisfaction can be gauged on the basis of his or her job, self-esteem, relationships, basic physical needs such as food, shelter, clothes and belongings and other factors (Lotfi & Solaimani, 2009; Maslow, 1987).

1.1 Definition of Satisfaction

Satisfaction can be defined as an experience of fulfilment of an expected outcome from consumption or activity (Parker & Mathews, 2001). Mesch & Manor (1998) also define satisfaction as the evaluation of features of the physical and social environment. Bruning, Langenhop & Green (2004) considered housing satisfaction as the gap that exists between residential needs and aspirations, and the current residential context. Satisfaction or dissatisfaction with a facility is influenced by prior expectations regarding the level of quality (Ekinci, 2004;

Sigala, 2004). In some cases information or disinformation lays the ground for the expectations of quality. If what is relayed or communicated to the customer does not match the expectation or experience, a negative perception of quality and satisfaction is generated (Asubonteng, McCleary, & Swan, 1996; Parasuraman, Zeithaml, & Berry, 1988). According to Wisniewski & Donnelly (1996), service quality means establishment of specifications and requirements to meet the needs and satisfaction of customers. McColl (1996) suggested that from a customer point-of-view, service quality means tendency of service to meet or exceed the expectations of customers. Kotler (2000) contended that likely chances can occur for a customer to either re-use the service/service-provider or recommend to others, if he/she perceives earlier received service above his/her expectations. Housing satisfaction does not only evaluates the quality of residential environment by measuring the satisfaction level of individuals' residential environment and its value, but also is a valid method to improve designs and develop policies to improve the quality of residential environment. For a service organization, it is vital for them to know how their services are perceived by their customers (Bashir, Sarki, & Samidi, 2012). According to Perreault & McCarthy (1999), as services are intangible, in terms of their sales, the customer's positive perception is an important consideration.

1.2 Dimensions of Service Quality

In the opinion of Ziethaml & Bitner (2003), service quality should be perceived in a multi-dimensional way. Parasuraman *et al.* (1988) proposed five dimensions: 1) reliability, 2) responsiveness, 3) assurance, 4) empathy and 5) tangibles. Reliability is the service provider's ability to perform certain services accurately and dependably (Parasuraman *et al*., 1988) in order to retain customers. Customers expect to re-do business with organizations which are credited with keeping their promise (Ziethaml & Bitner, 2003). In the context of this research, reliability includes: 1) services received on promised time by the residents, 2) sincere interest shown by the SSNIT Housing Management to address residents' complaints, and 3) performing general maintenance and other services correctly. Ziethaml & Bitner (2003) defined responsiveness as service providers' willingness to deliver prompt services and to help customers. In the context of this research, responsiveness includes management's response to necessary minor repairs. Ziethaml & Bitner (2003) further explained that while examining the service delivery process, it is important to consider the customer's point of view first, not the organizational prospective. Considering the management prospective (with regards to service delivery) may result in low perception of services by the residents since the perceived standards of residents may be different from perceived standards of the management. Assurance refers to employee's courtesy and knowledge, and ability to gain customer's confidence and trust (Bashir et al., 2012). Ziethaml & Bitner (2003) opined that service providers must assure the delivery of knowledge in a courteous manner to inspire more trust and confidence from their customers. The authors further explained that a link can be formed between management and their customers through inspiration of confidence and trust in customers' mind. In the context of this research, assurance includes: having good knowledge to handle the general maintenance requests of the residents. Service providers have to develop empathy in order to provide a positive impression in the minds of their customers to feel as being specially taken care of, and provided with immediate attention (Ziethaml & Bitner, 2003). In the context of this research, empathy includes: 1) special attention provided by the SSNIT Housing Management staff to residents and 2) accessibility of management when needed. Bashir et al. (2012) opined that the physical representations of services which are used by customers to evaluate quality are referred to as tangibles. Ziethaml & Bitner (2003) defined tangibles as physical appearance of facilities, personnel, communication materials, equipment etc. They further explained that service companies generally use this dimension to increase their image, signal quality to a customer and/or provide continuity. The service quality framework proposed by Parasuraman et al. (1988) was chosen for this research because it has been used in similar contexts in previous research (Bashir et al., 2012; Hamzah, 2009).

1.3 Housing Delivery in Ghana

Since Ghana's independence, provision of housing has remained central to the development agenda. Various policies, programs and institutions have sought to address issues such as land tenure, land title regulation, and provision of affordable housing units to the working population. However, a number of these housing strategies were negatively affected by lack of funds, poor macroeconomic environment and lack of private sector participation (Korquaye, 2011; Bank of Ghana Report, 2007). Ahadzie & Amoa-Mensah (2010) citing the Ghana National Development Plan (2008) asserted that, the problem of inadequate housing is one of the most critical socio-economic challenges facing Ghana. Currently, Ghana's housing deficit stands at more than 1 million, with an annual delivery of only 40,000 (Kpeglo et al., 2011; Ministry of Water Resources, Works and Housing Report, 2010; Mahama & Antwi, 2006). The 2000 Population and Housing Census (the 2010 Population and Housing Census not yet released) reported the existence of about 3.68 million dwelling units in Ghana, less than half of

which are classified as houses (Ghana Statistical Service, 2000). The report further indicates that Ghana's housing deficit would double in the next decade if the status quo is maintained, and the country is expected to put up 2.5 million housing units by 2025 (i.e. about 150,000 per year) if it is to meet the housing needs of the populace. In other words, a small city is required annually to meet the severe housing shortage in the country and the increasingly deteriorating state of existing housing. Thus, compared with the advanced countries, Ghana's housing industry remains undeveloped. It is against this background, that the Social Security and National Insurance Trust (SSNIT) was established in 1972 under the National Redemption Council Decree (NRCD) 127 as a statutory public Trust charged under the National Pensions Act 2008, Act 766, with the administration of Ghana's Basic National Social Security Pension Scheme and to cater for the first tier of the contributory three-tier scheme. The Trust is currently the largest non-bank financial institution in Ghana. The primary responsibility is to support part of lost income of Ghanaian workers or their dependants due to old age, invalidity, or loss of life (SSNIT Annual Report, 2012). However, with the increasing population and commercial activities nationwide, many organizations, institutions and government ministries in the 1970s saw the need to invest in buildings to house the people and also solve the problem of accommodation. From 1974 to date, SSNIT had commissioned the construction of 8,275 housing units across the country (Properties Department of SSNIT, 2012; Bank of Ghana Report, 2007) to provide affordable housing for workers, private individuals, the District Assemblies, State Institutions etc. Little is available on the quality performance evaluation of these housing in Ghana.

Ukoha & Beamish (1997) reported that the suitability of the living environment to the needs of the residents is essential for housing programs to be judged successful. The key to retaining tenants is not "bells and whistles," but the effort to satisfy the basic needs of the residents (Miller, Rossbach, & Munson, 1981). Quality performance evaluation should therefore be a matter of particular interest to public and private housing providers in seeking to increase occupants' satisfaction and maximize value for their money (Fatoye & Odusami, 2009). Currently, attention is shifting from giving residents value for their money to providing accommodation for desperate tenants. If the housing sector is to improve the quality of the residential buildings it produces, it must take a proactive approach to understanding users' views on the quality of housing being produced (Fatoye & Odusami, 2009). This can be done effectively through evaluation of the users' satisfaction with the quality performance of the dwelling houses (Fatoye & Odusami, 2009). In order to assess the level of quality achieved, feedback is required through performance evaluation techniques in respect of the buildings being studied. This will serve as a benchmark to quality improvement in the production of better housing for users and assist in providing healthy, productive and comfortable in/outdoor environment and long-term benefits to them. The aim of the study is to evaluate the performance of SSNIT housing in Ghana using residents' satisfaction approach with the view to developing policies to improve service quality and designs.

2. Methods

Data collected from secondary sources include existing stock of SSNIT flats in all the regions in Ghana and publications from journals and conferences. This study employed the cross-sectional approach and adopted quantitative research method for the collection of primary data. The primary data collection instrument involved structured questionnaire survey of residents in selected SSNIT flats in Ghana to obtain precise information needed for hypothesis testing (Danesh, Nasab, & Ling, 2012). The questionnaire was prepared based on service quality frameworks used in similar studies (Bashir et al., 2012; Hamzah, 2009). As this research is based on pre-tested theory, the deductive approach was used (Saunders et al., 2007). Housing locations with more than 200 flats were considered in the survey. Locations with fewer than 200 flats were either still under construction, their social amenities were not yet developed or were not under any management at the time of the study. This resulted in the survey being conducted at eight locations in six administrative regions in Ghana: Asuoyeboa in the Ashanti region (with 740 flats), Tamale FOH in the Northern region (with 284 flats), Anaji in the Western region (with 246 flats), Adweso Koforidua in the Eastern region (with 362 flats), Ho in the Volta Region (with 448 flats), and Adenta, Ashongman and Dansoman in the Greater Accra region (with 2602 flats). A sample size of 900 flats from the total population of 4682 flats in the selected locations was determined for the entire survey using the formula

$$n = {}^{N}/_{1 + N(e)^2}$$

where N = the total population size; e= the standard error of sampling distribution assumed to be 0.03 and n is the sample size.

Proportionate or quota sampling technique was used to select the sample size for each location as follows: Asuoyeboa (143 flats), Tamale FOH (55 flats), Anaji (48 flats), Adweso Koforidua (66 flats), Ho (87 flats), and

Adenta (245 flats), Ashongman (138 flats) and Dansoman (118 flats). The systematic sampling technique was used to select the respective sample flats at each location where the survey would be conducted. To select a sample flat, a sampling fraction was calculated for each cluster by dividing the sampling frame by the sample size to give a value which is rounded to the next whole number *n*. The first sample was randomly chosen within the first *n* samples in the sampling frame after which every n^{th} sample was chosen until the desired sample size was obtained. This sample was used for the study on the assumption that there exists a link between the characteristic of the sample and the population, allowing a series of referrals to be made within a circle of acquaintances (Berg, 1988). One respondent from each selected flat - the owner or the tenant – was asked to answer the questionnaire which comprised of closed-ended questions structured into two sections. Section 1 sought information about respondents' demographic characteristics. Section 2 focused on 36 items measuring the satisfaction of the residents with (1) the building features, (2) management of the flat, (3) the environmental or neighbourhood conditions and (4) the social amenities in the area. The residents' satisfaction with the above features was scored on a five-point Likert scale (where 1 = strongly dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied and 5 = strongly satisfied). The residents' satisfaction with the management of the SSNIT housing was assessed based on some of the issues in the five proposed dimensions of service quality: reliability, responsiveness, assurance, empathy and tangibles (Parasuraman et al., 1988). The face-to-face approach was adopted for the administration of the questionnaire in order to increase the response rate. A total of 747 responsive questionnaires were received, representing a response rate of 83%. This response rate was considered sufficient for the study (Moser & Kalton, 1993).

2.1 Method of Data Analysis

The respondents' demographic data was analysed using descriptive statistics, and the residents' satisfaction was analysed using Relative Satisfaction Index (RSI). The degree of satisfaction or dissatisfaction is a measure of the relative weight attached to a variable by all the residents taken together (Bello & Ajayi, 2010; Soofi, 1992). The five-point scale was transformed to relative satisfaction index for each variable as follows:

$$RSI = \frac{\sum W}{AN}$$

where, W = the weighting given to each variable by the respondents ranging from 1 to 5; A = the highest weight (i.e. 5 in the study) and N = the total number of respondents (i.e. 747 in the study).

The RSI values ranged from 0 to 1 (both not inclusive). Higher RSI values imply higher level of satisfaction with a given variable. The RSI values were also used to categorise variables relating to the building features studied, and to rank the managerial factors, social amenities and environmental factors.

3. Results and Discussion

3.1 Demographics

Out of 747 respondents involved in the study, 55% were male and 45% were female. In terms of age, 20% were between the ages of 20 and 29 years, 52% were between 30 and 49 years, and 28% were 50 years and above (Table 1). Majority of the respondents (65%) were married while 30% were single. The divorced and widowed accounted for 5% of the respondents. In terms of religion, 88% of the respondents were Christians and 12% were Muslims. Sixty-three percent (63%) of the respondents have stayed in their flats for over five years and the respondents were either owning (58%) or renting (42%) the flats. The long stay of majority of the respondents in the flats indicates the level of reliability and objectivity of the responses given in the survey.

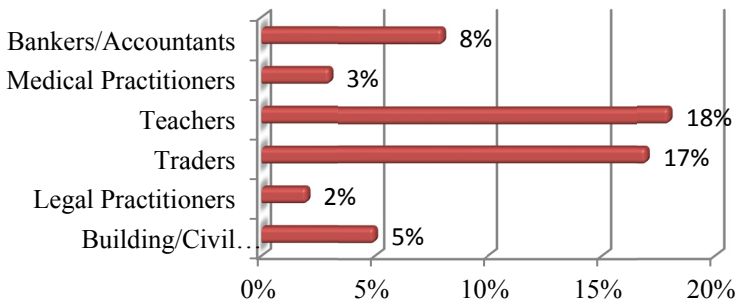

Figure 1. Respondents' employment status

Table 1. Respondents' demographic information

Demographic	Variable	Percentage (%)
Age	20-29 years	20
	30-39 years	25
	40-49 years	27
	50 and above	28
Gender	Male	55
	Female	45
Marital status	Single	30
	Married	65
	Divorced	3
	Widow	2
Religion	Christian	88
	Moslem	12
Mode of ownership	Renting	42
	Owning	58
Duration of residency in flats	0-5 years	37
	Between 5-10 years	34
	Above 10 years	29

3.2 Employment Status of Respondents

The results revealed that 18% of the residents involved in the survey were teachers of both public and private institutions, and 17% were traders (Figure 1). The rest of the residents were in financial institutions e.g. bankers and accountants (8%), construction practitioners (5%), medical practitioners (3%) and legal practitioners (3%). The results show that the SSNIT housing provides accommodation for people of varied professions in Ghana.

3.3 Overall Satisfaction with the SSNIT Housing

Seventy-two percent (72%) of the respondents were satisfied with the overall performance of the SSNIT flats (i.e. facilities in their flats, the management style, the social amenities and the housing environment) (Figure 2). Out of this number, 69% were just satisfied and 3% were strongly satisfied with the performance of the SSNIT flats. Seventeen percent (17%) of the respondents were neither satisfied nor dissatisfied with the SSNIT flats. The rest of the respondents were either dissatisfied (9%), or strongly dissatisfied (2%). The results show high satisfaction level for the SSNIT flats in Ghana, which is quite different from the situation in Nigeria where more than half of residents were dissatisfied with the houses of the Federal Capital Development Authority of Nigeria (Ukoha & Beamish, 1997). The high satisfaction level for the SSNIT flats may be attributed to a strong interplay between dwelling unit characteristics, good management policies, location and environmental factors (Vrbka & Combs, 1993; Awotona, 1991).

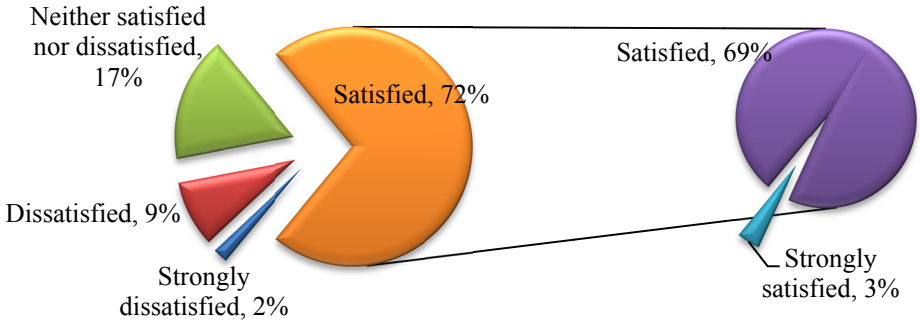

Figure 2. Overall satisfaction with housing characteristics

3.4 Residents' Relative Satisfaction with Building Features

The residents' satisfaction with the 26 building features in the SSNIT flats were categorised into three levels based on the RSI as follows: highly satisfied, satisfied and least satisfied. Highly satisfied features comprised of features with RSI greater than 0.900 (Figure 3), satisfied features comprised of features with RSI between 0.800 and 9.00 (Figure 4) and dissatisfied features comprised of features with RSI less than 0.800 (Figure 5). Salleh, Yusof, Salleh & Johari (2011) contends the physical characteristics of housing influence the level of satisfaction of residents. Figure 3 shows that residents in the SSNIT flats are highly satisfied with orientation of the block, availability of study space, ventilation of kitchen, adequacy of daylight distribution, fittings and fixtures in the kitchen, doors and window, floor to ceiling height and adequacy of artificial light distribution. These eight building features which recorded high level of satisfaction help to improve visibility and comfort in the flats.

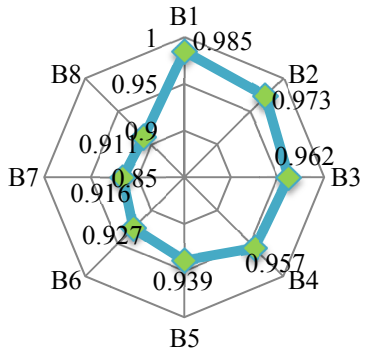

Figure 3. Highly satisfied building features (Note 1)

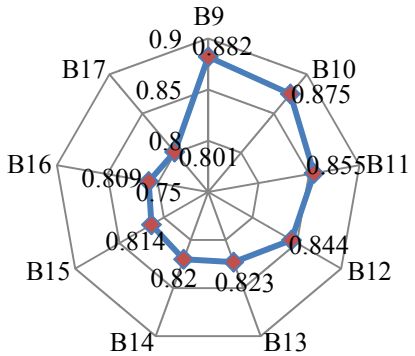

Figure 4. Satisfied building features (Note 2)

Figure 4 shows that residents are satisfied with the finishes to floors, adequacy of car parking space, roof performance in terms of leakage, adequacy of landscaping, kitchen size, adequacy of natural ventilation, sanitary fittings, adequacy of artificial ventilation, and privacy within the house. Most of the features in this category are those that meet the needs of residents in high socio-economic or social class. Residents in high social class need enough parking space with adequate security for their cars (Bello & Bello, 2007; Wallace, Maire, & Lachance, 2004). In a similar study, Ha (2008) observed that the residents of social housing estates in South Korea were rather highly dissatisfied with parking facilities and landscape architecture. Roofing of existing blocks performed well in terms of leakage, indicating a fairly good level of quality of construction and supervision of the projects. Estates with leaking roofs and cracked walls demonstrate poor construction and supervision (Muoghalu, 1991).

Figure 5 shows that roof performance in terms of heat transfer, size of the bedrooms, placement of electrical outlets, finishes to ceilings, adequacy of escape routes in terms of fire, size of the living rooms, finishes to walls, fire service systems and adequacy of garages are features that residents are least satisfied with, and these features also relate to the social class of residents. The residents expect management of the SSNIT housing to improve or

enhance features in this category in future maintenance programs or in any new projects in order to meet their social class.

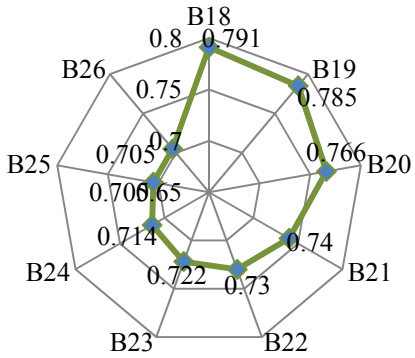

Figure 5. Least satisfied building features (Note 3)

3.5 Management

On residents' satisfaction with management policies on the SSNIT housing, the results show that *amount of rent paid,* and *the garbage collection system* are the two policies residents were most satisfied with. The residents, however, expressed low satisfaction with managements' response to minor repairs, accessibility to management and the general maintenance of the flats. Wood (2003) defines maintenance as the combination of all technical and administrative actions, including supervision actions intended to retain an item in, or restore it to, a state in which it can perform a required function. The results show that the service quality of the management of SSNIT housing is generally poor with regards to four of the five dimensions of service quality: reliability, responsiveness, assurance and empathy (Ziethaml & Bitner, 2003; Parasuraman et al., 1988).

Table 2. Residents' level of satisfaction with management policies

MANAGEMENT ISSUES	RSI	RANK
Amount of rent paid	0.734	1st
Garbage collection system	0.714	2nd
Handling of residents' complaints	0.685	3rd
General Maintenance of the building	0.544	4th
Accessibility to management	0.531	5th
Management response to necessary minor repairs	0.432	6th

The above results point to the need for change in attitude of SSNIT housing management personnel towards residents, regarding response to call for minor repair and general maintenance. The results also indicate that residents feel that they have good value for the rent paid, and that they are satisfied with level of efficiency of the garbage collection system, which agree with the high overall satisfaction level of residents recorded in the study. The findings confirm Leby & Hashim's (2010) assertion that the efficiency of garbage collection is an essential tool in the measurement of the satisfaction of residents.

3.6 The Neighbourhood and the Environment

Neighbourhood satisfaction refers to residents' overall evaluation of their neighbourhood. On SSNIT flats residents' level of satisfaction with the neighbourhood and the environment, the results (Table 3) show that they are most satisfied with the drainage, level of crime, and the dust pollution level in the area. Residents were, however, least satisfied with noise pollution and sanitation in the vicinity, ranked fourth and fifth respectively among the five factors evaluated. High satisfaction among residents encourages them to stay on and induces others to move in, and low satisfaction with the neighborhood environment urges current residents to move out.

Table 3. Residents' level of satisfaction with neighbourhood factors

NEIGHBOURHOOD FACTORS	RSI	RANK
Drainage	0.914	1st
Level of crime or burglary activities	0.891	2nd
Dust pollution level	0.722	3rd
Noise pollution	0.683	4th
Sanitation in the vicinity	0.687	5th

High neighborhood satisfaction increases households' sense of community and vice versa (Brower, 2003; Mesch & Manor, 1998). Studies have also shown that residential and neighborhood satisfaction also influences people's intentions to move (Brower, 2003; Lee et al., 1994). Marans & Rodgers (1975) and Marans & Spreckelmeyer (1981) found that the relationship between neighborhood satisfaction, decisions to move, and quality of life is a sequential process, with neighborhood satisfaction predicting mobility and mobility affecting quality of life (Hur & Morrow-Jones, 2008). Sebba & Churchman (1983) stated that noise may impair people's perceived control over an area and lead to decreased feelings of ownership, personal expression and freedom of behaviour. Findings of Savasdisara (1988) indicate that environmental factors, predominantly noise and ground vibration caused by traffic, strongly influence residential satisfaction. In a study of Danish neighbourhood preferences, Bjorklund & Klingborg (2005) reported that quietness was the third most important factor in neighbourhood satisfaction. Noise may be limited by creation of acoustical buffers between areas of noise and quiet, use of materials and interior finishes with high acoustical properties, and design of building layouts which reduce corridor length, thus breaking up areas which transmit sound. The findings from this study therefore agree with findings from the literature.

3.7 Social Amenities

On residents' satisfaction with social amenities in the localities, the results show that availability of post office, schools, electricity supply and markets and shops were the four social amenities residents were most satisfied with. Among the ten amenities evaluated, residents were least satisfied with the availability of recreational facilities, quality of television reception and reliability of water supply. The residential environment has become one of the most important factors that influence consumer choice and property selection (Visser, Dam & Hooimeijer, 2005). In a similar study, Ha (2008) observed that the residents of social housing estates in South Korea were also satisfied with neighbourhood amenities (health clinics, stores, banks, post office, etc.).

Table 4. Measure of satisfaction with social amenities

SOCIAL AMENITIES	RSI	RANK
1. Post office in housing area	0.823	1st
2. Availability of Schools	0.74	2nd
3. Reliability of Electricity supply	0.74	2nd
4. Availability of market and shops	0.734	4th
5. Availability of Hospital	0.694	5th
6. Availability of ICT facility	0.592	6th
7.Availability of Musalla	0.57	7th
8. Children park/recreational facility	0.539	8th
9. Quality of Television reception	0.529	9th
10. Reliability of Water supply	0.365	10th

4. Conclusion and Recommendation

The study sought the level of satisfaction of residents with SSNIT housing in Ghana. The results have shown that majority of the residents are satisfied with the general performance of the SSNIT housing, especially with the building features such as orientation of block, availability of study space, ventilation of kitchen, adequacy of daylight distribution, fittings and fixtures in the kitchen, doors and window, floor to ceiling height and adequacy of artificial light distribution. Residents are, however, dissatisfied with the adequacy of escape routes in terms of fire, size of the living rooms, finishes to walls, fire service systems and adequacy of garages among others. The residents also showed low level of satisfaction with managements' response to minor repairs and the general maintenance of the buildings. On neighbourhood and environmental factors, residents are most satisfied with the

drainage, level of crime, and the dust pollution level in the area but least satisfied with the noise pollution and sanitation in the vicinity.

The results indicates that residents in SSNIT flats expect management to improve on roof performance in terms of heat transfer, size of the bedrooms, placement of electrical outlets, finishes to ceilings, adequacy of escape routes in terms of fire, size of the living rooms, finishes to walls, fire service systems and adequacy of garages in future maintenance programs or in any new projects. Since residential environment has become one of the most important factors that influence consumer choice and property selection, it is recommended that the SSNIT housing management should adopt measures which will improve sanitation and reduce noise pollution in the vicinity. Management of the SSNIT housing should also respond promptly to calls for minor repairs and maintenance in order to ensure durability of the facilities and structural integrity of the buildings. Findings from this study provide useful feedback to SSNIT housing management in Ghana for the improvement of their housing facilities. The findings are also of value to real estate developers and facility managers in developing countries, particularly in Africa, seeking to improve their housing quality and offer better housing facilities in the near future. This study looked at the perspective of residents, thereby excluding the views of management. Further research that investigates service quality and neighbourhood satisfaction of SSNIT housing from management perspective should add value to current knowledge on residential satisfaction with social housing units.

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Notes

Note 1. Where B1 is 'orientation of block', B2 is 'availability of study space', B3 is 'ventilation of kitchen', B4 is 'adequacy of daylight distribution', B5 is 'fittings and fixtures in the kitchen', B6 is 'doors and window', B7 is 'floor to ceiling height' and B8 is 'adequacy of artificial light distribution'.

Note 2. Where B9 is 'finishes to floors', B10 is 'adequacy of car parking space', B11 is 'roof performance in terms of leakage', B12 is 'adequacy of landscaping', B13 is 'kitchen size', B14 is 'adequacy of natural ventilation', B15 is 'sanitary fittings', B16 is 'adequacy of artificial ventilation' and B17 is 'privacy within the house'.

Note 3. Where B18 is 'roof performance in terms of heat transfer', B19 is 'size of the bedrooms', B20 is 'placement of electrical outlets', B21 is 'finishes to ceilings', B22 is 'adequacy of escape routes in terms of fire', B23 is 'size of the living rooms', B24 is 'finishes to walls', B25 is 'fire services systems (adequacy of fire extinguishers)' and B26 is 'adequacy of garages'.