Residential Satisfaction in Low, Medium and High-Density Neighbourhoods: The Case of Eldoret Municipality, Kenya

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Abstract: **Residential satisfaction, that is the feeling of contentment when an individual has or realizes what he or she desires in a house, has been fundamental in predicting individual's perception of general quality of life, evaluating the success of housing developments by both the private and public sector, predicting potential residential mobility and determining inadequacies in residential neighbourhoods. This study sought to determine residential satisfaction in low, medium and high-density residential neighbourhoods of Eldoret Municipality. A mixed research design was used where a combination of both quantitative and qualitative research techniques were used to collect and analyse data. It was found out that residents in Eldoret municipality expressed a moderate level of residential satisfaction with a mean index of 77.5965%. However, satisfaction with dwelling unit component of residential environment was higher (82.4090%) compared to satisfaction with the neighbourhood component (74.158%).**

Key words: **Satisfaction, Residential Satisfaction, Residential Satisfaction Index.**

I. INTRODUCTION

While an understanding of people's satisfactory evaluation of a product or a service is believed to be vital in bringing forth improvements to better a product or service (Abidin et al., 2019), emphasis is hardly laid on the satisfaction of 'to be occupants' of housing projects. This is true especially in the developing nations where there's little research on residential satisfaction in housing projects and development of housing policies (Aigbavboa & Thwala, 2018; Springer, 2000). This scarcity of information on residential satisfaction has often led to planners and policy-makers into making assumptions in housing development projects and policies that do not always coincide with those of the residents hence leading to challenges in the housing sector (Van Noppen, 2012). Housing development, specifically the process of ensuring accessibility, affordability, maintenance of existing residential neighbourhoods and related infrastructure in habitable conditions has been a major government agenda in developing nations (Aigbavboa & Thwala, 2018). Enshrined in policies and programmes, governments world over have made efforts to ensure that they meet the right to adequate housing as stipulated in the 1948 Universal Declaration of Human Rights and in the 1966 International Covenant on Economic, Social and Cultural Rights. Under Kenyan law, the right to accessible and adequate housing and reasonable standards of sanitation is guaranteed in section 43(1)(b) of the Constitution of Kenya, (2010). In spite of all the efforts in formulating housing laws, policies and strategies, both nationally and internationally to mitigate the housing challenges, none has been able to provide a lasting solution to the overarching housing needs (Aigbavboa & Thwala, 2018; Majale et al., 2012; Van Noppen, 2012). In Kenya for instance, the jurisprudence on the right to housing remain thin, and as a result a number of cases on the matter housing rights have already paved way into Kenyan court rooms for further elaboration on the nature and content(Hakijamii, 2012).

The two major concerns about housing are quantitative concerns, aimed at meeting deficit in the number of dwelling units available to those in need and the qualitative concerns that shades light on the utility of housing to satisfy human needs. Unlike quantitative challenges which come and go with regards to economic and population changes, studies have shown that the gap in individual residential quality has continued to grow and have a significant influence on the quality of life and psychosocial aspects of the inhabitants(Byun & Ha, 2016; Mohit & Raja, 2014). Residential satisfaction, that is the feeling of contentment when an individual has or realizes what he or she desires in a house, has been fundamental in predicting individual's perception of general quality of life, evaluating the success of housing developments by both the private and public sector, predicting potential residential mobility and determining inadequacies in residential neighbourhoods (Mohit & Raja, 2014). Owing to this is the fact that residential satisfaction is a subjective response to the objective attributes of housing that is dwelling unit features and neighbourhood features, which are actually the factors that housing laws and policies seek to influence through housing planning standards. As such, residential satisfaction has been essential in understanding housing needs, influencing and directing future public and private investment in housing development(Liu, 2005). This study aimed at determining levels of residential satisfaction across neighbourhoods of Eldoret Municipality as a way of informing public policy and planning interventions for future housing units to be developed. It also serves to quantify the perception of general quality of life and the inadequacies of housing developments in meeting human needs that have to be addressed.

II. LITERATURE REVIEW

2.1 Overview

Research on residential satisfaction was first introduced in the western countries during the suburban development and housing boom period of 1950s and early 1960s to guide new residential development, living patterns and central city rebuilding through slum clearance programmes (Mohit & Raja, 2014). At, present developing countries are undergoing a similar experience of urbanization as a result of rapid industrialisation and economic growth. Governments in these countries, most of which are in Africa have been facilitating different types of houses for different income groups. Like for instance, in Kenya, the Civil Servants Housing Scheme Fund under the 2004 National Housing Policy that called for employers to facilitate employees acquire housing and The Big Four Agenda where one of the main focus is affordable housing. Nonetheless, residential satisfaction studies in the developing countries are limited to the extent at which it is not possible to ascertain the extent to which houses produced and provided by both the private and public sectors satisfy the aspirations of the citizens (Aigbavboa & Thwala, 2018). Residential satisfaction has been described as one of the most dynamic constructs since its meaning depends on factors such as place, time and purpose of the assessment, value system of the assessor that is architects, planners, sociologists, psychologists and urban geographers (Erdogan et al., 2007). The concept of residential satisfaction has got four different ways in which it can be used. First, as a key predictor of individual's perceptions of general quality of life. Second, as an ad hoc evaluative measure of judging the success of housing developments, both public and private. Third, as an indicator of incipient residential mobility that may affect housing demands and neighbourhood change. Lastly, as an assessment of perceptions of residents' inadequacies in their current housing environment which can be employed to improve future private and public housing developments (Mohit & Raja, 2014). As such, it is vital to understand the concept of residential satisfaction in the context of its theoretical and empirical perspectives especially in the developing nations.

2.2 The Concept of Residential Satisfaction

The phrase residential satisfaction is used interchangeably with housing satisfaction, the two referring to one and the same thing. Where housing refers to a composite of overall physical and social components that make up the housing system rather than just an individual's dwelling unit only (Francescato et al., 1987; Lu, 1999). Housing is further described as being a multidimensional phenomenon that is, have different structural typologies for example single family, different tenure (own or rent), location among others(Mohit & Raja, 2014).

Satisfaction on the other hand is the outcome of the process of evaluation between what was received and what was expected (Parkes et al., 2002). It was further elaborated as the perceived discrepancy between aspirations and achievement, ranging from the perception of fulfilment to that of deprivation since satisfaction is a subjective response to an objective environment (Potter & Cantarero, 2006). According to Galster, (1987), satisfaction is not only conditioned by physical aspects, but also by the ability to form social networks.

Residential satisfaction has been defined from both one dimension and multidimensional perspectives by a varied range of experts. Onibokun, (1974), defined residential satisfaction as a spatial aspect such that, housing satisfaction encompasses satisfaction with the dwelling unit and satisfaction with the neighbourhood. Satsangi & Kearns, (1992), defined residential satisfaction as psychological aspect that is 'a complex attitude'. In the same light Lu, (1999) also referred to residential satisfaction as a complex cognitive construct. Conversely, Galster, (1985) defined residential satisfaction as a social aspect. He pointed out the role of residential satisfaction as an excellent social indicator utilized by housing developers, analysts and policy makers alike. It is employed to evaluate residents' perceptions of and feelings for their housing units and environment and also the elucidates the degree of contentment experienced by an individual or a family member with reference to their present housing circumstances(Mccrea et al., 2005; Ogu, 2002). However, unlike the above one dimensional definitions of residential satisfaction, multi-dimensional thinkers such as Bechtel & Bechtel, (1997) submitted that residential satisfaction is determined by not only the house and its physical qualities, but also the surrounding neighbourhood and the social quality of the surrounding. Residential satisfaction is a peoples' response to the environment in which they reside where in this case the environment is the physical aspects of the residential context that is dwelling, housing developments, neighbourhoods, social, economic, organizational and also institutional aspects determinants of residential satisfaction(Francescato et al., 1987).

2.3 Theories in Residential Satisfaction

Theories of residential satisfaction are founded on the idea that residential satisfaction is a measure of the discrepancy between household actual and desired housing and neighbourhood situations(Galster & Hesser, 1981). Empirical studies on residential satisfaction are based on three main theories of residential satisfaction. These are Housing Needs Theory, Housing Deficit Theory and Psychological Construct Theory.

2.3.1 Housing Needs Theory

This theory was postulated by Rossi (1955) who introduces the idea of 'housing need' to conceptualize housing satisfaction/ dissatisfaction. This theory states that housing needs and desires change as households move through different life cycle stages and this creates a discrepancy between household needs, their housing and neighbourhood situations as explained by Maslow's hierarchy of needs. This

creates stress or dissatisfaction for the household with their current housing. As a result, these may lead to migration as a way of adjustment to housing needs. Life cycle changes may create a varied space requirement that is most significant aspect of need. This therefore means that, households are likely to feel dissatisfied if their housing and neighbourhoods do not meet their residential needs and aspirations. According to Maslow's hierarchy of needs, there are five stages. These stages are physiological needs, safety needs, belongingness and love need, esteem needs, and the need for self-actualization. It is very important to satisfy a person's basic need for developing a person's potentiality and capability in a society

2.3.2 Housing Deficit Theory

This theory was postulated by Morris & Winter (1978) where they introduced the concept of 'housing deficit' to describe residential satisfaction/dissatisfaction. In their housing adjustment model, they theorized that individuals judge their housing situation with regard to normatively defined norms including cultural norms defined by societal standards or rules for life conditions, and family or personal norms which results into households' own standards for housing. As such, if the actual housing conditions do not conform with the cultural and or family housing norms, a housing deficit is experienced which results into residential dissatisfaction. Households experiencing a housing deficit is likely to consider some form of housing adjustment through revision of their needs or improving their housing conditions through remodelling.

2.3.3 Psychological Construct Theory

It was postulated by Galster, (1985). The Psychological Construct theory is underpinned on the view that individuals cognitively construct a reference point for each particular aspect of their residential situation (Galster, 1985). The quality and or quality of the particular aspect implied by the reference point depends on the individual's self-assessed needs and aspirations (Galster & Hesser, 1981; William, 1976). If the current situation is perceived to be in proximate congruence with or superior to the reference situation, a psychological state of satisfaction is manifested. Otherwise, if the current state falls short of the reference situation by more than a threshold deficiency then; one may try to resolve the incongruence by adaptation that is redefining needs, reducing aspirations and or altering the evaluation of the current situation hence producing a minimum of satisfaction. If not able to adapt to the current residential context, dissatisfaction is manifested. However, as time goes by, dissatisfied residents might attempt to ameliorate dissatisfaction by altering conditions in the present dwelling or by moving to another, more fitting residential condition (Foote, 1960).

III. METHODOLOGY

3.1 Study area

The study area was Eldoret Municipality which is located at an approximate distance of 323.5 Km to the North Western part of Kenya, from Nairobi. It is made up of various residential neighbourhoods ranging from low, medium and high-density residential neighbourhoods. It is home to 475,716 people and a centre for agriculture and trade making it the fifth largest urban centre in Kenya after Nairobi, Mombasa, Kisumu and Nakuru(KNBS, 2019). Figure 1 presents a map of the study area.

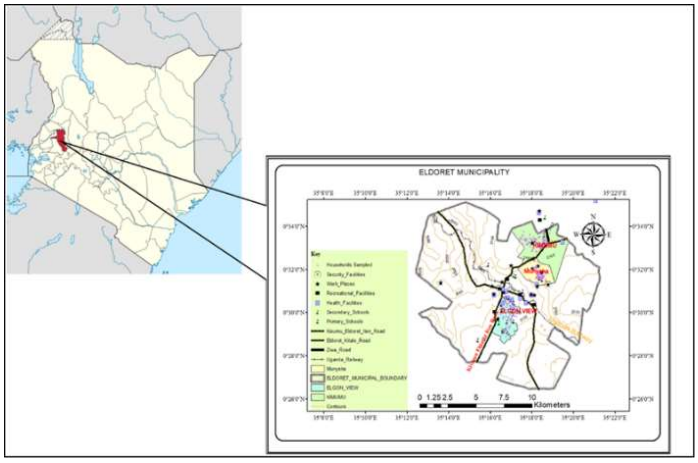

Figure 1 Study Area.

Source: Author 2020

3.2 Research Design

The study employed a mixed methods research design where a combination of both quantitative and qualitative research techniques was used to collect and analyse data. Mixed research design allowed complete and synergistic utilization of data by combining both qualitative and quantitative data in both collection and analysis process hence collecting comprehensive data using a flexible methodology (Creswell & Clark, 2017). The approach of data collection was concurrent triangulation. Concurrent triangulation is a strategy that put equal emphasizes both the qualitative and quantitative components of a research design. It suitable in the case of research questions aimed at getting information on a variable from multiple dimensions. The qualitative data are both obtained for whatever complimentary insights they can provide on the research question. Figure 2 illustrates the concurrent triangulation strategy. Data for both analysis is collected during initial stage, analysed and results compared to equally contribute to reaching the final conclusion(Kanazawa, 2017).

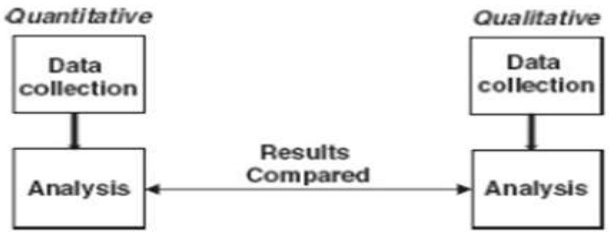

Figure 2 Concurrent Triangulation Strategy

Source: Creswell & Clark, 2017

3.3 Target Population

The target population of the study were the households in Eldoret Municipality. Specifically, consisting of low, medium and high-density neighbourhoods, dwelling units, households and plot allotment were the subjects of the study.

3.4 Sampling Design

In order for the data to be representative of the various income groups the study employed stratified, purposive and simple random sampling procedures as explained below:

3.4.1 Stratified Sampling

Elgon View (Block 13 and Block 14) is the only low-density residential neighbourhood in Eldoret municipality. Medium density residential neighbourhoods in Eldoret Municipality include West Indies (Block 5), Kapsoya Gardens (Block 8), Kapsoya (Block 9), Hazina/Kenya RE, Rock Centre area, Block 12 (Pioneer), Sambu (Block 19), Kingongo (Block 23), Rehema (Block 28), Mushroom (Block 28) and Kimumu (Block 30). High density residential areas include ShauriYako, Block 10 (Action Area and War Memorial), Block 11(Mwanzo and Kidiwa), Munyaka, Block 15(Kipkarren, Huruma and Rural Housing Estates), Kamukunji(Block 16), Langas (Block 22) and Kipkenyo (Block 24). These estates were stratified into low, medium and high-density residential neighbourhoods. Purposive sampling and simple random sampling techniques were employed to select the sample.

3.4.2 Purposive Sampling

Purposive sampling method was used to sample Elgon View neighbourhood as it is the only existing low-density neighbourhood in Eldoret Municipality (County Land Use Regulation Framework 2014-2017, 2014). According to Nanda (2005), purposive sampling is considered more appropriate when the space happens to be small and a known attribute of it is to be studied. In this sampling technique, the researcher uses his/her own expert judgement and purpose to decide whom to include in his/her sampling frame.

3.4.3 Simple Random Sampling

Kimumu and Munyaka were randomly picked from among the stratified residential neighbourhoods using Lottery method/ probability sampling. Under this sampling design, every item in space has an equal chance of inclusion in the sample.

3.5 Sample Size Determination and Sampling Procedure

The sample size was determined following Fischer (1991) using the formula below. This method is suitable in research where researcher does not have knowledge on the exact total number of items in the target population.

$$n = \frac{Z^2 p(1-p)}{D^2}$$

$$n = \frac{1.96^2 \times 0.24 \times 0.76}{0.05^2}$$

$$= 280.283136$$

$$= 280$$

Where,

n = Sample size for target population

Z = The Confidence Interval Value (1.96 for 95% Confidence Interval)

P= The Estimate Proportion of Population

D = The Margin of Error

This sample size was then distributed evenly across the study area using GIS at intervals of approximately 70 metres apart as per the sampling procedure. The target respondents were selected according to the strata that is low, medium and high-density residential neighbourhoods. In each stratum, the first respondent was identified randomly, after which the subsequent respondents were picked at an interval of approximately 70 metres. According to the formula a sample of 280 was to be used, however, due to non-response in some instances a sample of 246 was used

This led to a sample size of 57, 109, 80 households in Elgon View, Kimumu and Munyaka relative to the area. Figure 3 below shows the distribution of sampled households in the study area.

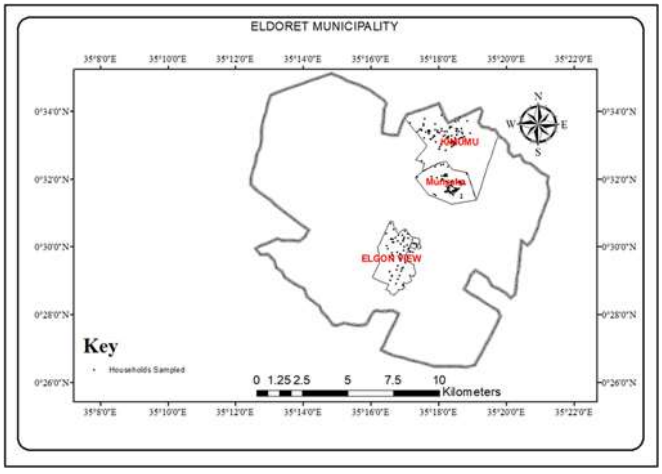

Figure 3 Sampled Households in the Study Area

Source: Author 2020

3.6 Data Collection Technique, Analysis and Management

The study focused on two major components of the residential environment that is, the dwelling unit component and the neighbourhood component. The dwelling unit component incorporated fundamental housing attributes linked to services and the structural component of housing. This included house typology (bungalow, flats, maisonette, row), number of bedrooms, building materials (wall, roof & floor), natural ventilation, natural lighting, rental cost, general cleanliness

and environmental aesthetics (Chapman & Lombard, 2006; Teck-Hong, 2012). The neighbourhood component comprised of a number of housing attributes that make up community services that is access to schools (primary & secondary), access to bitumen standard roads, public transport, security, neighbourhood cleanliness, access to portable water, access to electricity, street lighting and road conditions (Baum et al., 2010; Gibson, 2007; Hipp, 2010; Teck-Hong, 2011)

The respondents were asked to state their level of satisfaction with dwelling unit component and neighbourhood component stated above on a 1 to 5 Likert scale as follows: 1- 'Not Satisfied', 2- 'Slightly Satisfied', 3- 'Moderately Satisfied', 4- 'Very Satisfied' and 5- 'Extremely Satisfied'. Satisfaction index for the dwelling unit component and neighbourhood component were calculated as per equation 1:

Equation 1:

$$SIc = \frac{\sum_{i=1}^{N} gi}{\sum_{i=1}^{N} Gi} \times 100\%$$

Where;

SIc - *Satisfaction Index of a respondent with component 'c' that is Dwelling unit component/ Neighbourhood Component*

N - *The number of attributes scaled under component 'c'*

gi - *Actual score by respondent on the i* th *attribute*

Gi - *Maximum possible score under i* th *attribute on the scale*

Similarly, Residential Satisfaction Indices (RSI) were computed by summing up all the Likert scale scores each respondent gave with regards to the attributes under the dwelling unit and neighbourhood component. The sum of the scores were then divided by the maximum possible total score and then the answer multiplied by 100% to give the residential satisfaction index of the respondent as a percentage. As per the equations, the minimum index a respondent can have under any of the component of the residential environment is 20% while the maximum is 100%. The highest level of satisfaction was closer to 100 while the lower ones were nearer to 20. This was done as shown in equation 2.

Equation 2:

$$RSI = \frac{\sum_{i=1}^{N1} di + \sum_{i=1}^{N2} hi}{\sum_{i=1}^{N1} Di + \sum_{i=1}^{N2} Hi} \times 100\%$$

Where;

RSI - *Residential Satisfaction Index*

N1 - *Number of variables selected for scaling under dwelling unit component of residential environment*

N2 - *Number of variables selected for scaling under the neighbourhood component of residential environment*

di - *Actual score of the respondent on the i* th *attribute in the dwelling unit component of residential environment*

hi - *Actual score of the respondent on the i* th *attribute in the neighbourhood component of residential environment*

Di - *Maximum possible score for the i* th *attribute in the dwelling unit component of residential environment*

Hi - *Maximum possible score for the i* th *attribute in the neighbourhood component of residential environment*

The satisfaction indices were grouped into four regions of satisfaction that is 'very low', 'low', 'moderate' and 'high'. Given that the Likert scale ranged from 1 to 5, implying that each score was multiplied by 20. This therefore makes 60% the median value, hence satisfaction below 60% fall under the low-satisfaction region that is, 20-39% – very low, 40 -59%- low while those that are above that is 80 – 100% fall under high satisfaction region. RSI below 80% but not less than 60% that is 60-79% fall under the moderate satisfaction region.

The study was operationalized according to the following questions:

a) On a five-point Likert scale gauge your level of satisfaction with the following dwelling unit attributes

   i) House typology
   ii) Number of bedrooms,
   iii) Building materials (wall, roof & floor),
   iv) Natural ventilation,
   v) Natural lighting,
   vi) Rental cost,
   vii) General cleanliness and environmental aesthetics

b) On a five-point Likert scale gauge your level of satisfaction with the following neighbourhood attributes:

   i) Access to schools (primary & secondary),
   ii) Public transport
   iii) Security
   iv) Neighbourhood cleanliness
   v) Access to portable water
   vi) Likelihood to recommend a friend to live in this neighbourhood
   vii) Access to electricity
   viii) Street lighting
   ix) Road conditions

c) Do you rent or own the house you live in?

d) Why did you choose to live this housing environment?

IV. RESULTS

4.1 Residential Satisfaction in Eldoret Municipality

Table 1 and Figure 4 shows the satisfaction indices in Eldoret Municipality. The mean satisfaction with the dwelling unit component (82.41%) was higher compared to the mean neighbourhood component satisfaction (74.16%). This resulted to a mean residential satisfaction index of 77.60% which falls under the 'moderate' satisfaction category.

Table 1 Residential Satisfaction Indices in Eldoret Municipality

		Residential Satisfaction (RSI)			Satisfaction Index (Neighbourhood Component)			Satisfaction Index (Dwelling Unit Component)		
Satisfaction Indices	Region of Satisfaction	F	%	Cum %	f	%	Cum %	f	%	Cum %
20 -39	Very Low	0	0	0	0	0	0	0	0	0
40 – 49	Low	4	1.6	1.6	11	4.5	4.5	4	1.6	1.6
60 – 79	Moderate	123	50	51.6	145	58.9	63.4	70	28.5	30.1
80 – 100	High	119	48.4	100	90	36.6	100	172	69.9	100
Total		246	100	100	246	100	100	246	100	100
Mean		77.5965			74.158			82.4090		
Std. dev.		8.46435			8.57047			10.6753		
Range		36.67			54.29			48		
Min.		55			40			52		
Max.		91.67			94.29			100		

Source: Author Field Data, 2020

More than half of the satisfaction indices were in the high and moderate satisfaction regions. These were dwelling unit component, 69.9% and 28.5% neighbourhood component 36.6% and 58.9% and residential satisfaction 48.4% and 50% for high and moderate satisfaction regions respectively.

Dwelling unit component of housing had the highest percentage 69.9% of responses in the 'high' region of satisfaction while followed by 36.6% neighbourhood component satisfaction. This resulted to a residential satisfaction of 48.4% in the 'high' region of satisfaction. Satisfaction in the 'moderate' region of satisfaction was as follows 28.5% for dwelling unit component, 58.9% for neighbourhood component resulting to 50% of the respondents recording a 'moderate' level of residential satisfaction. The 'low' region of satisfaction had 1.6% for dwelling unit component, 4.5% for neighbourhood component satisfaction resulting to 1.6% of the respondents recording a residential satisfaction in the 'low' region of satisfaction. The 'very low' region of satisfaction had no responses.

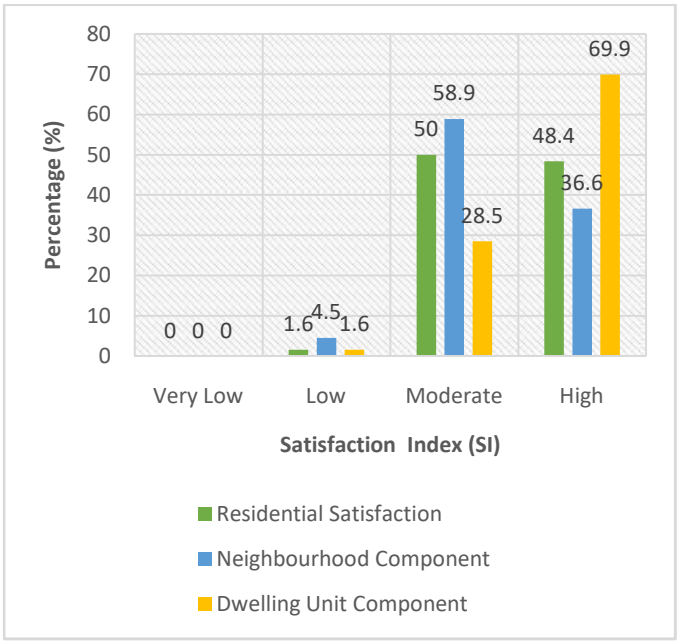

Figure 4 Residential Satisfaction Indices in Eldoret municipality

Source: Author Field Data, 2020

Figure 5 shows the distribution of residential satisfaction indices across the studied residential neighbourhoods. Almost the entire satisfaction indices (96.49%) in Elgon View neighbourhood were in the 'high' region of satisfaction with only 3.51% in the 'moderate' region of satisfaction and 0% responses in the 'low' region of satisfaction. Kimumu neighbourhood had an almost evenly distributed residential satisfaction index of 51.38% and 48.62% in the 'high' and 'moderate' regions of satisfaction and 0% responses in the 'low' region of satisfaction. Munyaka neighbourhood had the highest percentage 85% of satisfaction indices in the 'moderate' region of satisfaction, followed by 10% in the 'high' region of satisfaction and 5% in the 'low' region of satisfaction. The entire three neighbourhoods had nor responses in the 'very low' satisfaction region.

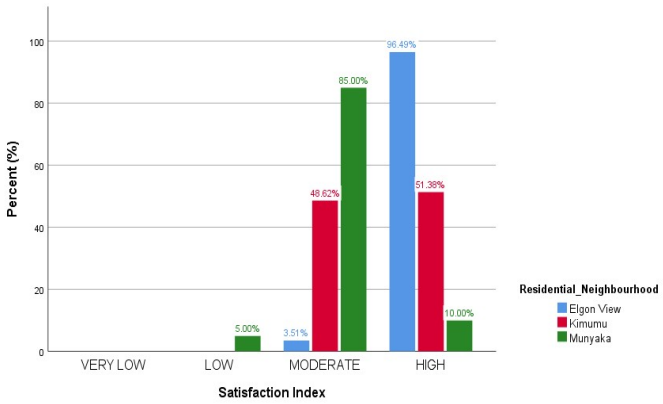

Figure 5 Residential Satisfaction across Neighbourhoods

Source: Author Field Data, 2020

4.2 Comparison of Residential Satisfaction across Neighbourhoods

Table 2 shows the results for Levene test for homogeneity of variance. The assumption of homogeneity of variance was tested and was found to have been violated using levene's test, *F (2,243) = 10.984, p = 0.000* for residential satisfaction indices.

Table 2 Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Residential Satisfaction Indices	Based on Mean	10.984	2	243	.000

Source: Author Field Data, 2020

Table 3 is the analysis of variance in residential satisfaction across the low density (Elgon View), medium density (Kimumu) and high density (Munyaka) neighbourhoods of Eldoret municipality (*N=246)*. The ANOVA was significant *F (2,243) = 126.249, p = .000* for residential satisfaction. It is therefore concluded that there is a significant difference in the level of residential satisfaction across residential low, medium and high-density neighbourhoods.

Table 3 Analysis of Variance

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Residential Satisfaction Indices	Between Groups	8944.779	2	4472.389	126.249	.000
	Within Groups	8608.299	243	35.425		
	Total	17553.078	245			

Source: Author Field Data, 2020

Table 4 shows the robust test for equality of means. Where the Brown-Forsythe test for equality of means residential satisfaction indices *F (2, 208.576) = 132.573, p = .000* shows that there is a significant difference in the means.

Table 4 Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
Residential Satisfaction Indices	Brown-Forsythe	132.573	2	208.576	.000
a. Asymptotically F distributed.					

Source: Author Field Data, 2020

The Post Hoc comparisons to evaluate pairwise difference among group means were conducted with the use of Tukey HSD test to further illustrate how the means differ from each other as shown in table 5.

Table 5 Tukey HSD Post Hoc Test

Multiple Comparisons							
Tukey HSD							
Dependent Variable	(I) Residential Neighbourhood	(J) Residential Neighbourhood	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Residential Satisfaction Indices	Elgon View	Kimumu	7.36111*	.97288	.000	5.0669	9.6553
		Munyaka	16.15278*	1.03165	.000	13.7200	18.5856
	Kimumu	Elgon View	-7.36111*	.97288	.000	-9.6553	-5.0669
		Munyaka	8.79167*	.87625	.000	6.7253	10.8580
	Munyaka	Elgon View	-16.15278*	1.03165	.000	-18.5856	-13.7200
		Kimumu	-8.79167*	.87625	.000	-10.8580	-6.7253
*. The mean difference is significant at the 0.05 level.							

Source: Author Field Data, 2020

The test revealed significant pairwise differences between the mean residential satisfaction indices of the three neighbourhoods.

Figure 6 is a graphical depiction of the mean differences across the three neighbourhoods. Residential satisfaction indices for Elgon View (86.111%), Kimumu (75.75%) and Munyaka (69.958%) in pairwise comparison significantly differ from each other (*p<.05)*.

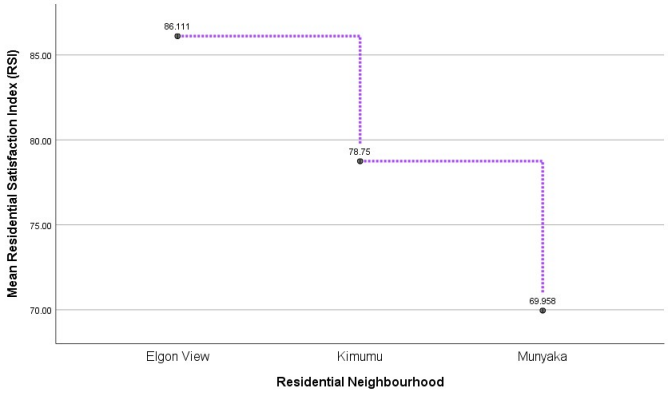

Figure 6 Mean Plot Residential Satisfaction Indices

Source: Author Field Data, 2020

4.3 Housing Tenure in Eldoret Municipality

Figure 7 shows housing tenure in the study area and its distribution across the three neighbourhoods. Findings shows that 61.38% of residents in Eldoret Municipality own their homes while 38.62% are renters. Further analysis of housing

tenure across the residential neighbourhoods revealed that Elgon view had the highest number of home owners (94.74%) as opposed to renters (5.26%). In Kimumu the distribution was almost even, however home owners (59.63%) were still more compared to renters 40.37%. On the other hand, Munyaka had the highest number of renters (60%) compared to home owners (40%).

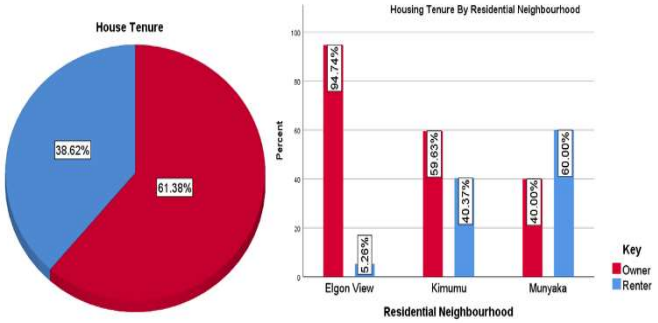

Figure 7 Housing Tenure by Residential Neighbourhood

Source: Author Field Data, 2020

4.4 Likelihood to Recommend a Friend and or Relative to the Residential Environment

Figure 8 shows the likelihood that the respondent would recommend a friend and or a relative to stay in their residential neighbourhood. A majority of the respondents 93.50% agreed that they would recommend a friend or relative to stay in their residential environment. On the contrary, 6.5% rejected and stated that they would not recommend a friend or a relative to stay in the residential environment.

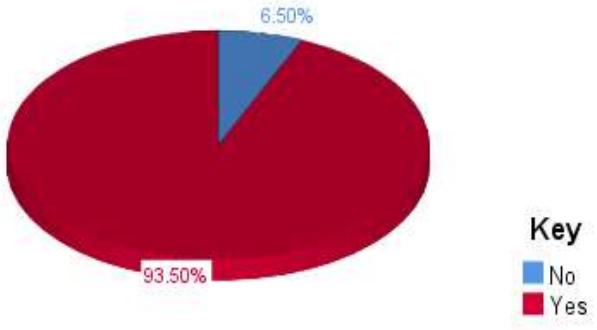

Figure 8 Likelihood to Recommend a Friend and or a Relative to Stay in Residential Environment

Source: Author Field Data, 2020

4.5 Reasons for Occupation of Residential Environments

Figure 9 shows the reasons why residents chose to occupy various residential neighbourhoods across Eldoret Municipality. In Elgon View, 64.91% of residents stated that they occupied the neighbourhood because it provided a serene environment (peaceful and quite) for them, home ownership (14.04%) was the second major reason followed by proximity to work (8.77%), friendly neighbours (5.26%), proximity to social amenities (3.51%), good accessibility and proximity to family at (1.75%) each.

Unlike, Elgon View where the motive behind occupation of the neighbourhood was skewed towards environmental serenity, residents in Kimumu had fairly even reasons behind its occupation. Kimumu had home ownership (32.11%) as the main reason behind occupation, followed by environmental serenity (22.02%), proximity to work (16.51%), good accessibility and proximity to social amenities (6.42%) each, place of birth (5.50%), availability of dwelling unit and friendly neighbours (3.67%) each, proximity to family (2.75%) and access to utility lines (0.92%).

Motives behind occupation of Munyaka neighbourhood were fairly spread out. The five main reasons for occupation of Munyaka neighbourhood were environmental serenity (25%), proximity to work (22.5%), friendly neighbours (16.25%), availability of dwelling units (12.5%) and home ownership (10%). Other reasons include place of birth and proximity to family (3.75%) each, good accessibility and proximity to social amenities (2.5%) each and access to utility lines (1.25%).

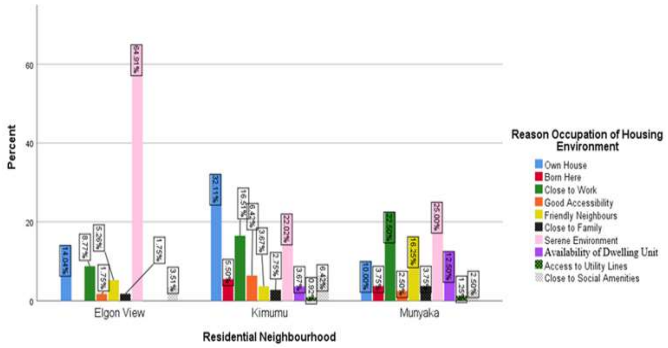

Figure 9 Reason for Occupation of Residential Environment

Source: Author Field Data, 2020

V. DISCUSSIONS

An upward prejudice in self-evaluated residential satisfaction has been recorded in literature(Lu, 1999). Similarly, this study showed a majority of the respondents recording high satisfaction indices of between 60 and 70 that is moderate to high. According to Amérigo & Aragones (1997) and Amole (2009), this is due to the propensity of individuals to adapt to their residential environment over time leading them to report high satisfaction levels. He postulated that, as individuals continue to reside in an area, they formulate coping mechanisms which improve their level of satisfaction. This is possible given that 3.75% of respondents in Munyaka and 5.5% of respondents in Kimumu stated that they resided in those neighbourhoods since they were born there. In the same

regard home ownership has been associated with high levels of residential satisfaction. Home owners have consistently recorded high levels of satisfaction with their homes, neighbourhoods and their lives in general (Barcus, 2004; Galster & Hesser, 1981; Teck-Hong, 2012; Teck-Hong, 2011). It is therefore notable that house tenure in the study area could also have contributed to the high satisfaction indices recorded by this study given that 61.38% of the respondents were home owners while renters accounted for only 38.62%. Barcus, (2004) & Kaitilla, (1993), found out that even with similar quality of housing, home owners were more likely to be satisfied than renters. This was associated with a sense of 'self-gratification' home owners get from their housing making them psychologically proud and satisfied with their housing. Mohit & Raja, (2014) further elaborates higher satisfaction from among home owners stating that, renters have less control over their residential environment and hence have lower housing quality. Home owners on the other hand, having the privilege of freehold properties, they conform and stay in their present homes longer hence are mostly likely to be connected with their neighbours and to participate activities to improve local aesthetics thus higher residential satisfaction (Teck-Hong, 2011).

Both the dwelling unit component and the neighbourhood component account for the overall residential satisfaction. All the same, satisfaction indices with dwelling unit components were generally higher compared to the satisfaction with the neighbourhood components. One reason attributed to high residential satisfaction particularly higher satisfaction in dwelling unit component as opposed to the neighbourhood component is the propensity of respondents to perceive their role as that of defending his or her house and residential environment from criticism(Troy, 1973). According to Kaitilla (1993) & Ogu (2002), there's the propensity for households to be generally more satisfied with their dwelling unit component than with the neighbourhood component. This according to literature is the fact that residents are more likely to overlook inadequacies in the dwelling unit component provided they are satisfied with the neighbourhood (Ukoha & Beamish, 1997). Further, a study conducted in Benin City showed that there is the propensity of respondents, more so home owners and landlords to defend their dwelling unit components by recording high satisfaction levels. This is done with the mentality that it is their duty to only show dissatisfaction with neighbourhood components termed a local authority's responsibility(Ogu, 2002). Additionally, respondents are expected to have higher levels of satisfaction with personal or private facets of their life than external facets. In this regard, dwelling unit for most home owners and even renters is a private facet of their life(Seik, 2000).

A household's judgement of its housing condition according to the housing adjustment model of residential mobility is done with reference to normatively defined norms. This are cultural norms decreed by societal standards and family and or personal norms which in turn make up a household's own standard for housing (Lu, 1999). When asked whether they would recommend a friend or a relative to live in their residential environment, 93.5% of the respondents said yes. This is an indication that most of the residents perceived their residential environment to be of good quality where according to the housing adjustment theory, households express high levels of satisfaction with dwelling unit and neighbourhoods when the current residential environment meets the norms. However, in the case of poor housing conditions, dissatisfaction in housing maybe reduced by improving residential environment through remodelling or by developing unconventional housing preferences to reduce dissatisfaction (Bruin & Cook, 1997).

An ANOVA of residential satisfaction for low (Elgon View), medium (Kimumu) and high (Munyaka) - density neighbourhoods showed a significant mean difference in the satisfaction indices. Elgon View had the highest mean satisfaction index (86.11%), Kimumu (78.75%) and Munyaka (69.958%). Low density residential neighbourhoods are associated with high quality and property values which lead to high residential satisfaction as opposed to high density residential neighbourhoods (Abidin et al., 2019b; Jaafar& Hasan, 2005). This could explain why satisfaction varied with Elgon View expressing the highest residential satisfaction followed by Kimumu and Munyaka with the least mean residential satisfaction index. Low density residential environments are always associated with higher prices which is an indicator of better homes(Teck-Hong, 2011). On the other hand, literature on the different satisfaction level in low, medium and high-density residential area suggests that many residents have a negative feeling towards high density residential areas as they view them as unattractive (Heath, 2001; Senior et al., 2004).

The significance of perceptual variables in assessing household's residential satisfaction cannot be overstated. This is due to the fact that residential satisfaction is a perception rather than actual configuration of residential environments (Francescato et al., 1987; Galster & Hesser, 1981). It has been postulated that the objective measures of residential environment alone are not enough to give a satisfactory account of residential satisfaction. Empirical finding in residential satisfaction show that specific groups of people evaluate residential environments differently depending on their own unique residential needs (Fried & Gleicher, 1961; Lu, 1999; Teck-Hong, 2011). As shown in figure 9, residents in Elgon View, Kimumu and Munyaka had each their own unique set of reasons for choosing to live in their residential environment. As such this could also have contributed to the high residential satisfaction indices in the study area given the diverse neighbourhoods that offer housing options according to the household's needs. Residents in Elgon View (64.91%) were mainly attracted by the environmental serenity the neighbourhood provided. Residents in Kimumu were attracted mainly by home ownership (32.11%), environmental serenity (22.02%) and proximity to work (16.51). In Munyaka,

residents had fairly evenly distributed reasons for residing in the neighbourhood with the major ones being environmental serenity (25%), proximity to work 22.5%, friendly neighbours 16.25% and availability of dwelling units (12.5%).

Nonetheless, residential satisfaction a measure of residential conditions has not gone without criticism (Ogu, 2002). According to Francescato et al., (1987), consistently high satisfaction indices often recorded by studies on residential satisfaction cannot represent true conditions on the ground. The basis behind this argument is that, the lower the respondent's awareness of better alternatives, the higher the level of satisfaction hence residential satisfaction is believed to be an unenlightened assessment. However, despite pointing out the limitations of residential satisfaction technique, Francescato et al., (1987), admitted that they were not enough to outweigh the significance of residential satisfaction as a measure of residential environment quality. Despite the propensity to record high satisfaction indices in self-assessed residential satisfaction, the differences in satisfaction indices from various respondents still reflect the inadequacies in housing that need to be addressed. This differences in in satisfaction indices according to residential satisfaction theories gives an insight between household's actual and desired dwelling unit and neighbourhood conditions (Galster, 1987; Galster & Hesser, 1981).

VI. CONCLUSIONS

With a mean residential satisfaction index of 77.5965%, it can be generally concluded that residents in Eldoret Municipality have a moderate level of satisfaction with their residential environment. However, there's a high (82.4090%) level of satisfaction with the dwelling unit component of the residential environment as opposed to the moderate (74.158%) level of satisfaction with the neighbourhood component of the residential environment. Satisfaction levels were significantly different within the three residential neighbourhoods with residents in Elgon View (low density neighbourhood) expressing the highest satisfaction levels followed by Kimumu (medium density neighbourhood) and lastly Munyaka (high density neighbourhood). The larger percentage (61.38%) of the respondents in the study area were in the home owner category as opposed to 38.62% who are renters. Respondents in the study area had different reasons for choosing to reside in the different neighbourhoods. Most residents in Elgon View favoured the serene environment the neighbourhood provided. In Kimumu home ownership, environmental serenity and proximity to work were the main attractive attributes for residents. Residents in Munyaka on the other hand, had almost evenly distributed and diverse number of reasons for choosing to reside in the neighbourhoods. This included proximity to work, friendly neighbours, environmental serenity, and availability of dwelling units among others.

VII. RECOMMENDATIONS

The appeal to comply to housing planning standards is aimed at ensuring that housing development is up to standards and habitable. Kenya for instance, has set up regulations to guide the development of major key components of residential areas. This include, accessibility, number of dwelling units per plot, plot coverage and building lines These standards are meant to mitigate major challenges that arise from unplanned development thus satisfying the human expectations from housing. Residential satisfaction as shown in the above discussion is a vital tool in assessing whether housing developments in a country are up to standards for human habitation. It is also useful in determining how well the housing sector in a country meets the needs of the citizens. Development in the housing sector therefore must seek to understand what citizens desire in house so as to solve the housing challenges in the country. Housing developers must understand that housing is not just simple structure to be developed on land without major considerations to other essential services and infrastructure that go alongside it. This can be done by studying individual neighbourhood and dwelling unit components of residential environments that affect residential satisfaction in order to develop housing that is desirable and meets the expectations of the occupants.

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