

Contextual Reports on Residential Satisfaction Studies from Developing Countries: Review Highlights

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ABSTRACT

Residential satisfaction, the perception of an individual regarding his residential provisions and an examination construct of the aid gotten for life fulfilment through the living dwelling and its socio-physical environment, has received a multidisciplinary investigation both in width and depth for over a long period even though not many were conducted in the developing nations until recent times. We have in this paper, briefly overviewed studies on residential satisfaction with emphasis on its determinants/predictors as reported in researches carried out in different parts of the globe. Residential satisfaction encompasses the gratification from dwelling as a unit of its features, qualities and functions as well as the attributes of the environment where the dwelling is situated; thereby comprising cognitive, affective and behavioural aspects of life. Researches, though with little exemptions, have generally reported correlations between satisfaction and socio-demographic attributes of the residents. Research outcomes have equally shown that satisfaction studies are used for predicting life satisfaction, measuring quality of life and estimating performance of housing projects. Its measurement has transcended the application of bivariate to multivariate and structural equation modelling in contemporary studies. It is however observed that the various studies on the topic have not sufficiently addressed the vacuum of establishing the predictors of this phenomenon in residential segregated urban environment rooted in violent conflicts.

Keywords: Residential satisfaction, contextual reports, developing countries, predictors, segregated urban environment

INTRODUCTION

Residential satisfaction is a widely researched topic by professionals in different fields of social science and has a long history grounded in two key factors of its association with the overall quality of life and a reflection of people's preference for choice of residential environment. Residential satisfaction has been variously defined by researchers in the field of urban studies, geography, sociology and environmental psychology. It is perceived in environmental psychology as the happiness an individual derives or experiences as a function of residing in a particular place [1]. It is also expressed as the gap between the wished and actual residential situations of a person as adjudged by the residents [2], [3]. It thus operationally implies the extent to which an individual is contented with his residential provisions evaluated within the confines of his socio-economic status. Conceptually, the definitions of residential satisfaction in previous studies entail cognitive, affective, and behavioural constructs [1].

Residential satisfaction which according to [4], is equally a reflection of the degree to which individuals are contented with their residential environment, consisting of the dwellings and the socio-physical environments or the degree to which a dweller's aspirations about his residential conditions and its surroundings are met [2], [5], [6]. It is an interdisciplinary theme that has continually aroused the interest and quest for enquiry by many professionals. [7] observe that the topic has emerged periodically as a hot

research topic in urban studies and geography while [8], consider it not only important in these professions but also in other social sciences including sociology and psychology. [8], [4], [5] as well note that though the subject has been an active topic for a long period, it has again in recent time, become a famous research area in geography, urban planning and housing studies. In fact, the earlier study of [9] qualifies this field of study as being among the topmost topic of interest to built environment scientists. This perhaps is as a result of its wide acknowledgment as a major contributor to the overall life satisfaction of man and his wellbeing [10], [11], [8] and its association with man's quality of life [9], [12]. Despite these, few of the empirical studies on the subject were conducted in the context of the developing countries compared to the developed nations [13].

APPROACHES OF RESIDENTIAL SATISFACTION STUDIES

Researches on residential satisfaction has a long history, though started in the west, but is also receiving significant attention in developing countries in recent times, most especially since the turn of the century. Literatures on these studies have often focussed on three domains of household socioeconomic and demographic attributes, dwelling characteristics and the attributes of the physical and social neighbourhood environments [12] which are broadly grouped into two components, the dwelling and the locational neighbourhood environment of the building [4]. Some studies investigate only one of these predictive constructs while others examine a combination of two or all these parameters of satisfaction [13], for example. Drawing inferences from the previous studies, Tao et al (2014) categorizes residential satisfaction studies into four. First are studies of selected demographic groups of the population. [14] for instance, studied satisfaction from races point of view examining the predictors of residential satisfaction of the Black Americans in the US and concluded that personal socio-demographic attributes and physical environmental factors were the key determinants of their residential satisfaction. The second group are the studies based on stages of life. The residential satisfaction of about 1000 married women was examined across cognitive, subjective, social and behavioural characteristics by [9] and reported that residential satisfaction has a positive correlation with the density and quality of the dwelling, security, neighbourhood facilities and urban infrastructure. The third classification according to this author, are those researches in respect of housing preference noting that [15] evaluated residential satisfaction with regards to comfort, health, safety and sense of community. The last category are the studies on the basis of dwelling design and performance.

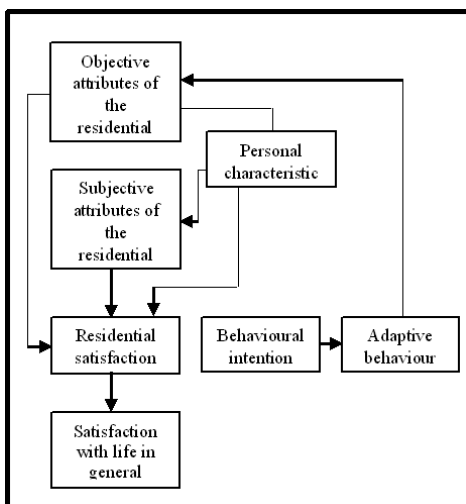
[3] for example assessed the design and performance of core housing in Ogun state, Nigeria through the evaluation of the occupants' satisfaction and discovered that majority of the residents were satisfied with the design. Although Tao et al's classification is a good effort in satisfaction studies, it may however require a little further effort to assess its coverage for various contextual studies and peculiarity of residential satisfaction of other prevailing residential circumstances such as those of slum dwellers, inhabitants of redeveloped areas of the city, informal settlements, traditional cities, urban villages, and those examining residential satisfaction of inhabitants close to highways, industries and the likes. Evidence from the literature points to an indication that three classical studies are widely referenced in residential satisfaction's studies. First is the pioneering work of [16] that postulated and created awareness that residential dissatisfaction results in residential mobility. He asserted that at a point in time in the cycle of life, space and required utilities of a house become insufficient and therefore not satisfied to the individual who will have to eventually move to a more suitable house. In this theory, residential mobility is hinged on residential satisfaction. The second is the housing adjustment theory alongside the model of housing deficit [17]. The theory contends that there is a minimum benchmark of housing requirements set by the dictates of the society and/or family norms, and the closer the residential condition of an individual is to the benchmark, the higher the residential satisfaction and vice versa. The theory suggests that if disharmony results between the two, it may be addressed by a way of adjustment in the individual's housing needs and aspirations to suit the available space, by making improvement on the existing house to meet his needs and aspirations or by deciding to relocate to a place where such needs and aspirations can be met. The work of [2] which conceptualizes residential satisfaction as the extent to which the actual residential condition satisfies the expectation of the dweller is the third. It is a measure of the differences between what is residentially

available to a person and what he wishes to have as a residential dwelling and environment. Two approaches can be generally distinguished for the understanding of residential satisfaction; purposive approach and actual-aspiration gap approach [18]. Purposive approach as elaborated by [2], relates to the degree to which the dwelling and residential environment enhance or inhibit the attainment of the goal and objectives of the residents [19], [20]. Aspiration-gap on the other hand, credited to [21] measures the relationship between the desire, that is the standard set by the user for himself and the actual residential condition of the user defined within the socio-economic attributes, needs; experience, taste, and aspirations of the resident [9], [22], [6]. This implies that individual expresses his degree of residential satisfaction with the residence on the basis of the perceived closeness of the residential environment to his residential desires. [23] also observes that residential satisfaction perspectives vary among researchers. According to them, to some, it is a measure of the amount of fulfilment derived from residing in in a house or an area (neighbourhood) as rated by the inhabitant. In this case, satisfaction functions as a criterion for assessing the quality of the residence which itself has a direct link with the quality of life, hence, a dependent variable. On the other side, are the researches that hold satisfaction as a predictive measure for the performance of residential dwelling and environment in consideration of its meeting the needs of the residents [9], [3], [24]; thereby becoming an instrument for feedback for policy makers, hence, an independent variable. The two main perspectives correspond with human ecological and systematic approaches identified by [9].

MEASUREMENT OF RESIDENTIAL SATISFACTION

The earlier studies that were carried out in the west, as cited in [14], such as [25], [26], [27] and [28], employed only the attributes of the physical environment to measure the predictors of residential satisfaction but later studies examined the relationship of the satisfaction with socio-demographic characteristics, in addition to the physical environment. According to [18], [19] [29], [30], residential satisfaction is a multidimensional construct that can be measured both objectively and subjectively. While objective measures mostly deal with the physical attributes of the dwellings, facilities, management services and the physical environment [31] [32], the subjective measures residents' perception, attitudes and aspirations [19]. The subjective measurement is however not only more important [19] but also most frequently employed as evident in the literature. This is simply because the objective measurement is incapable of examining and explaining the psychological aspects of satisfaction and the fact that residents are in better position to provide the experiential account of how their residential environment is supporting them in fulfilling their life goals. According to [9], and as illustrated by their model shown in Fig. 1 below, objectively measured aspects of satisfaction can no longer be regarded as objectives but subjective once they have been evaluated by the residents.

Fig. 1: A systematic model of residential satisfaction.



(Adapted from [9])

The model which comprises of the cognitive, affective and behavioural aspects of satisfaction, indicates that socio-demographic and economic attributes which have influence on the aspiration gap of the residents, has implications on the subjective attributes of satisfaction. The notion of the model has been applied in other residential studies (see [30], [32] for example). Most of the earlier studies employed bi-variate statistical measures to explain residential satisfaction of a given group such as the elderly, the poor or the housewives [33]. There has however been a paradigm shift as most satisfaction researches in recent time explain the degree of association of satisfaction with attributes of housing, the physical and social environment as well as the socio-demographic characteristics of the residents using different types of regression analysis for exploration of the principal components. Few studies in most recent times such as [34] and [8] have also employed structural equation modelling to analyse the association of the different socio-demographic, objective and subjective (perception) variables with both the housing and non-housing components of residential satisfaction with the believe that the problem of collinearity is avoided with this technique.

PURPOSE OF RESIDENTIAL SATISFACTION STUDIES

A review of the literature shows that the purpose of residential satisfaction studies can be summarily classed into three as highlighted below.

- 1) Residential satisfaction studies serve as good predictors of the people's quality of life [35], [36], [31], [38] and a proxy for overall wellbeing [39], [11], [8].
- 2) Studies have also indicated their usage for prediction of residents' behaviour e.g. residential mobility and moving intentions [18], [32], [16].
- 3) They are equally useful for measuring the performance of existing housing projects and predicting the success of future housing programmes [3] thereby providing feedback for policy makers and professionals in the built environment [40], [20].

It should however be noted that residential satisfaction studies conducted in segregated urban environments most especially those with violent conflict background, can contribute to policy options regarding whether segregated rival groups in the city should be kept apart or be desegregated. This significant purpose is yet to be well explored.

DETERMINANTS OF RESIDENTIAL SATISFACTION

Researchers from various professions in social sciences have continuously widened the scope of understanding of the predictive factors that influence residential satisfaction. It is a near consensus in the literature of the topic that, quality of the dwelling as a unit and its tenureship, the neighbourhood environment (including the neighbours), and socioeconomic/demographic characteristics of the dwellers are the three composite aspects that predict residential satisfaction in the general context. However, contemporary researchers have employed several variables of these constructs for the prediction of individual households or groups' satisfaction. [8], using structural equation modelling for analysis of data collected in Beijing, concluded that the usage of the residential environment and the affective neighbourhood experience are both positively correlated with residential satisfaction. Although the result of their research showed that some residents are consistently dissatisfied with all residential context, and some dwellings features to all categories of people, the study of [41] in Ohio found that objective contextual and compositional characteristics of individual's dwelling and the neighbourhood environment, are significantly associated with residential satisfaction. This finding is in tandem with the research outcome of [42] which submitted that residential satisfaction rating is a function of the size of the dwelling and the quality of the environment. Residential satisfaction in densified residential areas of the city, one of the modern strategies

for managing urbanizations in cities (densification), has also been reported to vary with the attributes of the dwelling and neighbourhood environment, most especially the domain of the dwelling, its design features and social attachment to the neighbourhood [40]. This variation may also be a function of individual's perception and the household size as well as a factor of the variation in tenureship, as home ownership has been found to be a critical influencing factor in the literature of residential satisfaction even though not very many researches have been conducted in this regard and the few available of such efforts were carried out in the developed western nations [13]. The relationship of home ownership and satisfaction was investigated and was found to be a key indicator of residential satisfaction in seven out of eight European countries in a research conducted by [43] as owner-occupiers express higher satisfaction than the tenants. Equal rate of satisfaction was however obtained for both renters and home owners in the eighth country. Similarly, housing tenureship was found to be positively correlated with residential satisfaction in studies conducted in other places. This results from the fact that home ownership raises the status of the owner [44], implies higher level of security compared to the renters, financially advantageous in terms of property appreciation, decrease mortgage liabilities, and credit accessibility [45], and gives the owner better social identity and more incentive to create social capital [13]. Sense of belonging and safety, as well as less development of the rental market compared with the sale housing market in China, are other possible factors established for positive correlation recorded between home ownership and satisfaction in the study in Hangzhou by [13]. The study further submitted that housing characteristics, including size, age, decoration, floor evaluation, daylight and building quality, and neighbourhood characteristics such as sanitation, transport facilities, and access to school, were all positively associated with residential satisfaction. This in some parts, conforms to the early study of [46] which submitted that transport perceived vandalization problem, traffic and attributes of the neighbourhood, largely explain satisfaction with the neighbourhood environment. Contrary to the research outcomes from the western literature and China in respect of home ownership however, [47], recorded low residential satisfaction among the owner-occupiers of low income public housing in Kuala Lumpur, Malaysia, most especially with some components of the house including toilet, bathroom and dining. Meanwhile, aside the earlier reasons adduced for positive association of home ownership with residential satisfaction, its consistent influence may be a function of self-esteem, sense of life achievement, and actualization that is attached to owning a house. [48] also concluded that having a house creates a psychological pride in the owner. [49] and [42] found a stronger relationship between residents' perception of the "attractive appearance and safety of their neighbourhoods" and satisfaction compared with the other variables. This concurs with the findings of [50] whose study of Franklin county, Ohio, suggested appearance as the most influencing factor of neighbourhood satisfaction. Green space, a significant element in the environmental aesthetics and healthy living, has also been found to be a predictor of residential satisfaction, even though man's activities has done a lot of damage to the green environment without attention to these natural elements that connect him with the naturalness of the space [51]. The role of the natural residential green spaces in residential areas cannot be over-emphasized, as it provides natural fresh atmosphere for relaxation, which provides aesthetics and mental health in the cities. Considering the ideal living environmental conditions for the elderly in line with the body of existing knowledge, and with respect to accessibility to public facilities, open spaces, housing support services, [52] evaluated the residential satisfaction of the elderly people in two neighbourhoods of Prague city of Czech republic that underwent transformation into a tourist/commercial centres and revitalization using open and close-ended questionnaire instruments for data collection. The study discovered that the respondents expressed fair satisfaction with their residential neighbourhood environment. This declines from the perception of other researchers who believe that regeneration changes the structure of the living environment and effects stress on the elderly who have a long history of residency in a given neighbourhood [53]. [54] examined the correlation between "residential satisfaction, sense of belonging, and loneliness" of community-based and institutionalized-based older adults, and discovered that residential satisfaction is positively associated with sense of belonging but inversely with loneliness. The research also suggested that higher level of contact of the community-based adults with close members of their social groups, increases residential satisfaction among

them. [55] examined residential satisfaction perception among students living outside campus at three levels of environment- the dwelling, neighbourhood and city in Shah Alam in Malaysia using factor analysis. The result of their study suggests that levels of environment should not be pre-determined before examination, rather be allowed to unveil itself through the views of the respondents, and that students' satisfaction do not follow a defined order in the magnitude of the environmental scale. Other features within the neighbourhood or city have also been found to impact residential satisfaction. [56] for instance, reported a positive association of 85% between proximity to highway and residential satisfaction from their study in Netherlands. This may not be expected due to the presumption of noise and air pollution that are associated with such locations but the report also conforms to the earlier studies of [39] and [50]. Value attachment to properties in such locations and availability of facilities in such dwellings are possible influences that may make the occupants to overlook the perceived negative implications that result in inverse correlations.

CONTEXTUAL REPORTS OF STUDIES ON SATISFACTION DETERMINANTS IN DIFFERENT RESIDENTIAL ENVIRONMENT IN DEVELOPING COUNTRIES

Reported determinants of residential satisfaction are vast as obvious from the immediate preceding section. Apart from socio-economic characteristics that have wide predictive influence on residential satisfaction, the determinants mostly depend on the subjective perception of the respondents which are also significantly influenced by the objective factors of the dwelling and residential environment. Most of these studies were however carried out in the developed countries but available literature shows that researches in satisfaction studies is fast gaining interest in the developing nations most especially from the last two decades.

- **Satisfaction in public residential housing**

The dwelling, neighbourhood environment, provision of services, and management of public housing were found to be good predictors of housing satisfaction in public housing in Abeokuta, Nigeria [3]. They also obtained a similar results from their study of residential satisfaction in workers' public core housing estate in Ogun state where 51% of residents were reportedly satisfied with their housing as a dwelling and its environment. [32] assessed the degree of residential satisfaction of inhabitants of low-cost housing estates in Kuala Lumpur, within the realm of five components (housing characteristics, housing unit support services, public facilities, neighbourhood facilities, and the social environment) and discovered that occupants were generally and moderately satisfied with their residential environment even though the satisfaction recorded for housing unit features and the social environment are lower compared to the other features. They equally suggested that improvement in management in the area of security, road perimeters and solid waste, were required for enhancement of satisfaction. Although, investigation of building performance through satisfaction of residents in order to provide feedback for policy makers and developers of the houses was the primary motive of their research, the study of [57] seems to confirm this finding when they reported that residents in public estates in Ogun state, Nigeria, were generally satisfied with their dwellings. [58] reported a different outcome in the federal capital city of Nigeria, Abuja however. [57] yet in another investigation, advanced owner-occupier as one of the possible factors required to enhance residential satisfaction in public housing. Meanwhile, [30] reported from their study of public housing in Hulhumale, Bangkok where despite their moderate expression of satisfaction of at least 3.24 on a scale of 5.0 with their residence, 63% of residents who indicated interest of moving out of the housing area, were owner-occupier. This seems to be a contradiction to the general belief and empirical reports that willingness to move is seemingly considered an indication of dissatisfaction in residential satisfaction studies as postulated by [16]. An implication of this perhaps, is that residents may be satisfied with the tenureship and not with the dwellings and other social factors within the housing environment. Family size which [16] considered as a push factor, and age of the house which was reportedly lower in Ogun state, Nigeria than Hulhumale, Bangkok, might also contribute to the disparity in the results of these two studies with similar level of development. [47] investigated residential satisfaction of the occupants of the public low-cost housing in Kuala Lumpur and submitted that

over 80% of the respondents were not satisfied with the absence and/or inadequacy of some key components of the house including dining room, bathroom, and toilet.; and concluded that 41% of the occupants were generally not satisfied with the housing projects. [32], on a five group component predictors, affirmed the earlier conclusion of [47] revealing that occupants of low-cost housing in Kuala Lumpur, were though moderately satisfied with the dwelling unit support services, public and neighbourhood facilities but expressed their dissatisfaction with the dwelling unit features and the social environment. The non-satisfaction with the social environment quite deviates from the findings obtained from private low-cost housing in Pulau Pinang and Terrenganu states in the same country where a good link was established between satisfaction and the features of the neighbourhood [59]. This observed difference between the results obtained from two locations in Malaysia may be due to the differences in the initial expectation of the residents in the capital city and other locations, and some level of cultural differences and differences in the providers (public versus private).

- **Residential satisfaction in slums and informal settlements**

[5] studied residential satisfaction of migrant and non-migrant residents on regional basis in three informal settlements of China: Beijing, Shanghai, and Guangzhou, hypothesizing variation in satisfaction among the three cities. The study reported that respondents were on a general level satisfied with security from criminal activities even though the non-migrants recorded a higher level of satisfaction with the variable. The overall satisfaction index of their study for housing, sanitary, security, and neighbourhood, showed a lot of variations among the cities, and as well between migrants and non- migrants, though migrants generally record lower satisfaction rates in all the cities despite the former indicated higher degree of satisfaction with sanitation, security and quality of the neighbourhoods in Beijing and Shanghai. Li and Wu's study however concluded that the migrants' expectation with respect to facilities in these two cities was low at the first instance as this was quite different from Guangzhou where migrants have a share in some of the welfare and benefits enjoyed by the non-migrants. [5]'s study is one of the few satisfaction researches that make comparisons among cities and their findings conformed with the general belief that if residency of a group in an area is by their choice, is meeting their set predetermined conditions for the choice, and have stayed long in the environment, they may be satisfied irrespective of the conditions of the place due to the strong bond that might have been formed with the place and friendly neighbours (place attachment) as noted in the outcome of previous studies. These findings conform to some reports from developed countries such as [60] study in Madrid city which discovered that psycho-social aspects such as relationships with neighbours and the degree of the residential environmental attachment were strong predictors of residential satisfaction. [61] in their comparative studies between slum and non-slum inhabitants noted that slum inhabitants in Calcutta were less satisfied with their residential conditions compared to the rich.

- **Redevelopment and residential satisfaction**

Several researches have been conducted to evaluate the reaction of people to redevelopment in terms of their satisfaction with the project, their relocated housing and environment. Contrary to the roles that social dislocation is expected to play in determining satisfaction of the displaced, [62] in his survey of redevelopment projects in the inner city of Beijing, China, submitted that the dimension of the dwelling in terms of perimeter (size and length) are the most significant determinant of residential satisfaction and not the redevelopment as a project. This seems not to agree with such other studies such as [5] that suggested neighbourhood attachment as the most significant predictor of residential segregation but conformed to the investigative research on Shanghai, China by [63] which discovered that resettled residents did not express sense of dissatisfaction. This was reportedly due to appreciable compensation and the hope of residents regaining their abode seeing the speed of the redevelopment. The hope for better accommodation from the redevelopment programme appeared to be the latent determinant of residential satisfaction.

- **Socio-economic class and residential satisfaction**

Most investigative studies on satisfaction show a positive correlation between socio-economic status and residential satisfaction. However, research findings have indicated that different income groups in different places are satisfied with different aspects of the dwellings and residential environment. While the middle income population in Medan city, Iran, preferred source of residential satisfaction are, the location, public facilities, safety of the environment, and good accessibility [64], [65] reported that in Randar Baru Bangi, Malaysia, the middle income are highly satisfied with the space and prices of their houses but expressed dissatisfaction with some unit areas of the dwelling like the kitchen and plumbing, as well as public facilities within the neighbourhood. This variation between similar income earners in different developing countries is an indication that income level itself may not be the primary determinant of residential satisfaction, but the individual's interest.

- **Migrants and residential satisfaction**

The population of migrant workers in China, put at 15.8% of the aggregate population of the nation, who live in overcrowded, poorest housing conditions, was subjected to investigation by [12] to determine the level of their residential satisfaction. They were found not to be as dissatisfied as presumed, as over 80% of the temporary workers who occupied very small housing spaces and dormitories in the inner suburbs, were either satisfied or neutral about their housing conditions even though they were less satisfied when their satisfaction was assessed in comparison with their hometown residences. This also agrees with the earlier finding of [66]. The temporary nature of such housing seems to be responsible for this satisfaction level as the workers perhaps care less about their immediate living conditions so far it is not their permanent homes; and the belief of possibility of returning home in the future. [12] also investigated the satisfaction of the migrant workers with their residential environment in four districts Shenzhen, China with over 72% of residents as migrants. Using descriptive statistics, exploratory factor and ordinal regression analyses to analyse the longitudinal data collected through surveying questionnaires, they found that majority of the respondents were neutral in respect of their residential satisfaction, although they responded not satisfied compared with their residences in their home countries. Among the various aspects investigated were security, access to infrastructure, management services, ease of transportation, housing size, housing environment, and distance to workplace. Most of these attributes were neither positively nor negatively associated with satisfaction taking exception with the ease of journey to work places that indicated a positive correlation with dissatisfaction.

GAP IN RESIDENTIAL SATISFACTION STUDIES

Despite the width and the depth of researches on satisfaction studies as seen in this coalesced review, it is noted that studies on the subject in segregated urban environment in which segregation attributes are employed as independent variables, such as the work of [14] in the US, has not attracted much attention; most especially in segregated cities with violent conflict background. This is a very important aspect of the theme because such segregation is peculiarly different from the widely discussed segregation in the western literature as residents in the city are of the same race, though with varying languages and ethnicity, and have hitherto co-habit the same residential environment prior conflict that drifted them apart. It may appeal to instinct to assume and/or predict in affirmative that it is obvious that segregated inhabitants who have been displaced from their original habitats, are expected to have outright residential dissatisfaction but such a conclusion may lack scientific justification. [4] in their study of satisfaction in post-second world war housing estates that were attributed with numerous negative indices ranging from poor quality of construction and design to its occupation by congestion of members in the low strata, weak safety arrangement and social control in eight European countries, similarly warned that such a conclusion should

not be drawn in haste. Over 80% of the migrants workers who occupied smaller spaces and live in dormitory inner suburbs, under poorest condition of housing in China, for instance, were either satisfied or neutral about their residential conditions [12], [66]. The study of [63] revealed that less educated, older, low income people in Beijing, China, who were displaced from their neighbourhoods as a result of redevelopment, who ordinarily were expected to be utterly dissatisfied with their housing, were found to be otherwise satisfied with their housing but dissatisfied with their neighbourhood. Likewise, [5] discovered that low income and migrants mostly displayed equal level of satisfaction with the indigenous and middle income people in Beijing, Shanghai and Guangzhou, even though they hypothesized that the indigenes would be more satisfied. In a similar way, [67] recorded that over 60% of the occupants of large public housing estates in Boston were unwilling to relocate despite the observed low quality attributes of the estates. Residents living in what may appear unsuitable poor housing conditions can still be satisfied [60], [68] because the neighbourhood choice is made on features that were important to them and hence satisfy them [69]. Corresponding to this, despite the popularity of the variable's positive correlation with satisfaction in the literature, home ownership was found not to impact residential satisfaction among the low income earners in Dalian, China while housing space did [70]. There is therefore a research vacuum and an open need for an in-depth investigation that will enable objective decision on scientific footing in respect of residential satisfaction of inhabitants in segregated cities so that knowledge can be broadened on the subject. Moreso, it has been argued that residents may be dynamic by a way of adapting and adjusting to the characteristic situations of the neighbourhood where they find themselves or stay for a long time (Cao & Wang, 2016).

CONCLUDING REMARKS

This brief review of the literature affirms the earlier statement by researchers that a long list of studies exist on residential satisfaction. Both objective and subjective assessment are adopted by authors though the latter, which is the respondents' self-rated perceptions regarding the residential variables of investigation, is more commonly employed. This perhaps is due to the fact that the inhabitants of a dwelling or residential environment are in better position to express their feelings and attitudes about their residential situations, how it is aiding them to fulfil their life goals, and its closeness to their residential expectations. Its determinant factors have been investigated in both public and private residential environments, and at home, medium (neighbourhood) and large (city) scales [1]. Inferences drawn from the conclusions and suggestions made by various research findings and reports show that socioeconomic and demographic (personal characteristics), dwelling features, and neighbourhood attributes, are central to the determinants of residential satisfaction [40], [7], [4], [8]. Revelations from recent empirical studies have equally suggested other parameters including residential preference [7], affective experience of the residential environment [8], and migration [12], [66] as predictors of residential satisfaction. In other contexts, researchers have also identified varying factors as the predictors of residential satisfaction under different circumstances such as social attachment to neighbourhood in slum area despite their stigmas [5], dimension of the dwelling in redeveloped areas [62], owner occupier, provision of services, management and the environment in public housing [57], [3], [32]. [8] in their residential satisfaction studies on the 'contributions of the usage and affective experience of the residential environment to residential satisfaction in China', recommended that further studies on the topic should look beyond just the characteristics of the residential environment but consider the impact of involvement in residential neighbourhood activities. A search through the literature indicates that education and income level are directly associated with satisfaction, that is increase in education and income results in higher residential satisfaction. [56] observed that these attributes are functions of affordability and choice. Age is also found to impact on satisfaction, likewise home ownership [48], [43], [45], [13], [34], [44] and dwelling quality, type and size [40], [4], [41], [71], [34] are also generally found to influence residential satisfaction. The overall observation from the available literature is that the attributes employed for investigation in satisfaction studies is far from being rigid; predictive variables of a study depend on the context of the study and the conceptual outcome. This was similarly observed by [3] when they contended that satisfaction studies would continue to make useful contributions to

knowledge so much it explores issues and concepts that are peculiar to certain residential contexts. For instance, a study that targets housing performance and provision of feedback to developers and or policy makers in respect of a public housing scheme, i.e. post occupancy evaluation (POE) such as [47], [32] and [30] in Malaysia; [3] and [72] in Nigeria, investigated the dwelling and design attributes of the buildings and the study that examined satisfaction in an informal settlement such as that of [5] in China, with a view to gaining understanding of the residents' perception about their residential environment, investigated both physical and social environment attributes as predictors of residential satisfaction and [42] whose focus was on comparison of satisfaction between the traditional city and suburbs in California examined location, quietness, safety, mix use, and neighbourhood attractiveness, among others. Likewise, [12] employed migration characteristics to investigate the satisfaction of the migrant workers in China and Amole's examination of satisfaction in students' residential environment in 2009, considered variables like balcony, reading room, common room and laundry to be important for examination. Infact, it has been observed that even when similar variables are employed for different studies in different contexts, variations may be found in their outcomes [56]. [5] posited that such differences may be due to the technique employed for collecting and analysing the data used for the studies and is therefore difficult to universalize the outcome of a satisfaction study. [71] for instance argued that preference should be given to logit model above linear regression, while other authors like [34], [8] preferred to use Structural Equation Modelling (SEM) claiming that it avoids multicollinearity and can simultaneously handle latent and observed variables. On the whole however, as noted by [13], [5] and [8], most of the studies were conducted in the Western nations and as such residential satisfaction studies are very handy in the developing countries of the world. [5] attributed to the difficulty of data collection. Infact, a review made to specifically search for peer-reviewed satisfaction studies in the developing nations that:

1. subjectively measured residential satisfaction as a dependent variable, employing other attributes of the dwelling units and residential environment as independent variables;
2. were conducted within the last 35 years; and
3. employed purely quantitative or mix mode method to measure the independent variables, showed that not a large number of studies could be identified and only few countries (China, Malaysia, Nigeria, Ghana, Turkey, Iran, Thailand and Uganda) were largely involved in the studies. China, Malaysia, and Nigeria, respectively make the first three largest contributions to satisfaction studies in this part of the world. It is further surprising that only five authors are involved in the 8 studies conducted in Nigeria. Infact, it is quite revealing that attention is just beginning to be focused on the topic in this part of the globe in the last 15 years as about 80% of these studies were conducted within this period (2006-2022). The variables employed for predicting satisfaction by the various studies are numerous; all of which however hover around the dwelling unit, physical and social environment where the building is situated, tenureship, public or neighbourhood facilities, management of the estates, and estate support services. Many of these researches evaluated only one of these independent variables, though others combined multiple variables.

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