

RESIDENTS' ASSESSMENT OF NEIGHBOURHOOD QUALITY IN PENANG, MALAYSIA

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Abstract: Housing neighbourhoods affect the quality of life of their residents. Residential and neighbourhood quality to certain extent determines the quality of life of the people. The residents' perception of their housing and neighbourhood environment is based on their satisfaction of dwelling units, physical, social and economic environment. The purpose of this research is to measure neighbourhood quality in both socio-economic and environmental dimensions based on neighbourhood satisfaction of the housing residents using Likert scale. The data were collected from 722 respondents from low-income, middle-income and high-income residential neighbourhoods in Penang. The data analysis used both descriptive and quantitative methods to identify residents' perceptions of their neighbourhood quality. The study found out that the residents were generally satisfied with the physical, social and economic aspects, except for washing room area, recreational and open space, social interaction and cost of living. However, their satisfaction level varied with their neighbourhoods and family background. The research findings would inevitably affect housing market and national housing policies. Therefore, housing policies should take into account the residents' own assessments of their housing neighbourhood and local conditions in order to achieve sustainable urban neighbourhood development.

Keywords: Environment, Neighbourhood quality, Public facilities, Quality of life, Residents' satisfaction

INTRODUCTION

There are many ways of describing what a neighbourhood is. Basically it is a human population with mixture of social-demographic profiles being influenced by surrounding environment in physical, economy and social features. A micro view is on house itself while macro perspectives are measured within the

neighbourhood compounds. A neighbourhood is a specific geographic area and functionally as a set of social network. It is a spatial unit with social interactions where residents seek to realize common values and maintain effective social control [1]. It is an urban environment and human well-being where the specification of life concerns and determination of how reactions to them predict people's sense of overall life quality [2].

The neighbourhood quality reflects a sense of community and quality of life and an adequacy of physical, social and economic aspects and satisfaction by the residents in their residential and neighbourhood area [3, 4]. A recent trend of studies on housing and neighbourhood satisfaction in Malaysia focuses on the dwelling unit support services, public and neighbourhood facilities [5], social features and social integration affecting the neighbourhood quality [6] and homeownership, housing characteristics and delivery system [7]. The purpose of this study is to examine the residents' assessment of the neighbourhood quality in Penang, Malaysia.

THEORETICAL FRAMEWORK

The conceptualisation of neighbourhood as presented by Galster [8] is a bundle of spatially based attributes associated with clusters of residences in conjunction with other land uses and amenities. People's attitude on their place of residence also depends on their socio-demographic characteristics. A study by Alison et al. [9] indicates residents of different types of neighbourhood vary in the importance they attach to different aspects of their local area. Residential and neighbourhood quality to certain extent determines the quality of life of the people. Sirgy & Cornwell [10] defines satisfaction with physical, social and economic characteristics of the neighbourhood turn to contribute quality of life. Housing satisfaction refers to residents' contentment on their current housing which based on elements such as space organisation,

layout and facilities provided and the surrounding social aspects. While, Varady and Carrozza [11] divide tenant satisfaction into four distinct types of satisfaction, namely i) satisfaction with dwelling unit; ii) satisfaction with the service provided ; ii) satisfaction with the whole package received for the rent paid; iv) satisfaction with the neighbourhood and area. Speare [12] highlights residential satisfaction is assumed to depend on characteristics and aspirations of the household, the characteristics of the location, and 'social bonds' between household members and other people. According to Djebuarni & Al-Abes [13], residential satisfaction is the main evaluation of individual perception of quality of life in general which triggers them to move out after identifying some negative outcomes in the neighbourhood [12, 14].

Previous studies on housing and neighbourhood satisfaction have analysed many variables affecting neighbourhood quality. Dahmann[15] examined satisfaction with housing, street lighting and noise level in the neighbourhood as physical features affecting neighbourhood quality. Others examined architectural-planning space, organization and accessibility of space green areas, welfare, recreational, commercial and transport services, pace of life and environmental health [16] and adequacy of facilities and community facilities [17, 18]. Tan [7] examined housing satisfaction using four constructs, such as homeownership, socio-economic characteristics, housing characteristics and housing delivery system.

Other studies focused on convenience with transportation and social services, amenity with natural environment, historical environment, historical environment and living spaces, health with water environment, sound environment air environment and safety from disaster affecting neighbourhood quality [19]. Hur, Nasar and Chun[20] discovered surrounding environment, perceived attributes of the environment and evaluation of the attributes of surrounding environment as the main factors. While Lovejoy, Handy and Mokhtarian [21] evaluated residents' perceptions such as attractiveness, quiet, liveliness, big yards, safety, mixed-use and good infrastructure and Lee et al. [22] assessed element of landscapes as good quality environment in housing and neighbourhood quality.

Social characteristics, such as community interaction variables are related to social relation and context features [5]. Measurement on social interaction is to evaluate human aspects that influence the neighbourhood quality. Satisfaction with home value, cost living in the community and socio-economic status of the neighbourhood are the main economic

features affecting the neighbourhood quality. Tan [7] finds that higher price of home is associated with better quality housing. The following variables are measurement items such as residents' employment, level of income, unemployment rate, private car ownership, and the quality of buildings and health, migration, labour situation, income, household characteristics, duration of residence, annual income, household size and housing cost artificial [23].

The study on the assessment of resident's satisfaction of public low cost housing in Kuala Lumpur, Malaysia was based on dwelling unit features, dwelling unit support services, public facilities, social environment and neighbourhood facilities. The residents were moderately satisfied with their residential environment and they were moderately satisfied with the dwelling unit support services, public and neighbourhood facilities [5]. The study also showed that dwelling unit features, social environment and support services had high positive correlation with residential satisfaction index (RSI). However, the correlation between RSI and socio-economic attributes was found to be negative. In another study, Hashim [23] examined the relationship between social integration and residential satisfaction of low cost residents' in Malaysia. The results showed that residents with strong residential attachments and high levels of satisfaction were actively involved in the community activities held in the neighbourhood. Physical structures of the house and poor social and physical environments could be affected the social integration in the neighbourhood. Similarly, Salleh [24] found that satisfaction of integration with neighbours, people living in the neighbourhood and race relations were among the main social features affecting the neighbourhood quality.

METHODOLOGY

This study used three different types of socio-economy status (SES) of residential neighbourhood in Penang, i.e. low, medium and high cost housing based on the Ministry of Housing and Local Government guidelines. Low cost housing price is RM 40,000 or below, low medium cost housing price is between RM 40,001 – RM 60,000 and medium cost housing price is between RM 60,001 – RM 100,000. RM100, 001 and more is considering as a high cost house. Low medium cost is included into low cost housing type for an easy interpretation of the findings and discussions as the National Property Information Centre (NAPIC) considers housing population on the low-medium cost type is rather small compared to low, medium and high cost population in Penang Island.

The study measured neighbourhood quality in both socio-economic and environmental dimensions based

on neighbourhood satisfaction of the housing residents using Likert scale. The data were collected from the respondents comprising 722 heads of households living in low, medium and high cost housing scheme in ten different places in Penang Island. The analysis used both descriptive and quantitative methods to identify residents' perceptions of their neighbourhood quality. Cross-tabulations of the neighbourhood characteristics were used to examine the relative importance of neighbourhood qualities. The respondents were chosen by using stratified data sampling taken from NAPIC information on household population in Penang Island based on price per unit. Then, cluster method was used to locate three types of SES in ten different locations.

Respondents were asked to rate their satisfaction with a range of neighbourhood characteristics in terms of physical characteristics (dwelling features, neighbourhood facilities, neighbourhood environment), neighbourhood economy and social environment. The respondents were required to rate their satisfaction from 1 to 5 on Likert scale ranging from 1 (very dissatisfied) to 5 (very satisfied). Background and housing profiles were also included in this analysis to control variation in residents' characteristics as categorical data. In order to identify residents' perception on their housing and neighbourhood, descriptive analysis had been adopted using mean value of each items questioned in the survey. The analysis then identified the main factors affecting neighbourhood quality using factor analysis.

RESULTS AND DISCUSSION

The result are analysed and discussed with background information followed by descriptive statistics for all variables followed by factor analysis. The indication of variables in the study defines the neighbourhood quality which measures life satisfaction within housing and neighbourhood boundaries. The variables are divided into 5 categories, namely dwelling features, neighbourhood facilities, neighbourhood environment, neighbourhood economy and neighbourhood social environment.

Table 1 shows satisfaction level towards dwelling features. Residents of low cost housing are moderately satisfied with dwelling features except washing room and garden areas. The findings however contrast with Mohit et al. [5] which identified low cost residents are dissatisfied with dwelling features. Nurizan [25] also finds that low cost residents are not satisfied with size of the house. Residents of medium cost housing are unsatisfied

upon garden area features. Medium cost houses consist of landed and high rise property. The reason they are not satisfied may due to limited space in high rise residents.

Based on table 2, residents of low cost housing are unsatisfied under neighbourhood facilities items such as guardhouse services, recreational and children playground, landscape and open space and facilities for handicapped. The result is contrast with Mohit et al. [5]. However, after identification on the measurement items, it is totally different. While residents of medium and high cost housing express the satisfaction level with all the neighbourhood facilities items, except facilities for handicapped. The result however is not supported by the study by Oh [26] where he finds that middle income households are not satisfied with public facilities such as recreational area and playground area.

Basically, the residents of three SES are satisfied with the items of public transport, accessibility, neighbourhood environment and economy (Tables 3 and 4). Satisfaction result towards public transport is support from Nurizan's study in Johor Bahru which focuses on residents of low cost housing. The result is different from Salleh [6], as the residents of low cost housing in Penang are not satisfied with the services of public transport. However, the service has improved recently based on the feedback from the public. Thus, the residents of three different SES expressed moderate satisfaction towards physical attributes.

In economic aspects, cost of living item is unfavourable to residents of low cost housing compared to residents of medium and high cost housing. This is due to financial constraints. While the other two SES shows moderately satisfied. Frank and Enkawa [27] indicate that high level satisfaction is from higher income groups. The study generally concludes that residents are moderately satisfied with economic attributes.

In social aspects, most of the respondents are satisfied with neighbourhoods' environments items and they are moderately agreed in attachment aspects (Table 5). Previous empirical studies have shown neighbourhood satisfaction and neighbourhood attachment have a positive correlation indicating residents' are less likely to leave whom attached to their neighbourhood [28]. In conclusion, residents show moderate satisfaction in physical, social and economy aspects. Their interaction among themselves are rather less than expected. The findings of the study indicate that the residents of three SES occasionally involve in neighbourhood activities, such as rarely visit neighbours and vice versa.

Table 1: Satisfaction with dwelling features

Features	Level of Satisfaction		
	Low Cost	Medium Cost	High Cost
Living area	3.39	3.74	3.82
Kitchen area	3.23	3.60	3.69
Dining area	3.27	3.65	3.65
Bedroom area	3.30	3.79	3.78
Bathroom area	3.09	3.58	3.68
Washing room area	2.96	3.32	3.42
Garden area	2.85	2.90	3.49
Room arrangement	3.22	3.52	3.72
Air ventilation	3.39	3.58	3.82
Electrical supply	3.73	3.90	3.96
Ware supply	3.71	3.76	3.98
Clothes lines	3.28	3.19	3.53
Garbage disposal	3.27	3.59	3.76

Table 2: Satisfaction with neighbourhood facilities

Facilities	Level of Satisfaction		
	Low Cost	Medium Cost	High Cost
Guard house	2.84	3.42	3.20
Recreational park & playground	2.48	3.08	3.45
Landscape & open space	2.72	3.15	3.53
Convenience store	3.60	3.69	3.78
Pedestrian walkway	3.16	3.08	3.48
Primary/Secondary school	3.61	3.70	3.62
Market	3.50	3.44	3.57
Hospital	3.27	3.19	3.38
Religious place	3.39	3.58	3.82
Community hall	3.37	3.24	3.49
Police station	3.29	3.25	3.31
Fire brigade	3.05	3.09	3.30
Facilities for handicapped	2.30	2.34	2.83
Public transport Convenience	3.39	3.73	3.37
Frequency of bus service	3.15	3.59	3.55

Table 3: Satisfaction with neighbourhood environment

Environment	Level of Satisfaction		
	Low Cost	Medium Cost	High Cost
Cleanliness	3.15	3.51	3.42
Maintenance	3.11	3.29	3.56
Security	3.08	3.23	3.41
Quietness and privacy	3.20	3.49	3.62
Ventilation	3.31	3.44	3.67
Sunlight orientation	3.35	3.53	3.70
Noise level	3.23	3.74	3.55

Table 4: Satisfaction with neighbourhood economy

Economy	Level of Satisfaction		
	Low Cost	Medium Cost	High Cost
Employment opportunities	3.32	3.51	3.42
Income opportunities	3.33	3.44	3.38
Property price	3.07	3.27	3.63
Cost of living	2.97	3.15	3.25

Table 5: Satisfaction with social environment

Environment	Level of Satisfaction		
	Low Cost	Medium Cost	High Cost
Relationship with neighbours	3.47	3.57	3.56
Communication with neighbours	3.40	3.40	3.40
Soc. interaction at commercial. ctres	3.19	3.12	3.13
Soc. interaction at religious. ctres	3.26	3.24	3.28
Involvement in neighbourhood acts.	2.93	2.95	2.75
Frequency of visits by neighbours	2.85	2.81	2.73
Frequency of visiting neighbours	2.88	2.82	2.69
Attachment to neighbourhoods	3.31	3.30	3.22
Social mix in the neighbourhood	3.20	3.31	3.27

Factor analysis with principal component and Varimax rotation methods was used in the study to determine the main factors of residents' perception on neighbourhood quality. The analysis of data from Penang resulted in the extraction of ten factors with Eigenvalues greater than 1. The 10 factors accounted for 69% of total variance across 53 items in high cost housing, 68% of total variance across 51 items in medium cost housing and 66% of total variance across 54 items in low cost housing. Based on the analysis, the dominant factors are social features for each SES followed by dwelling unit features.

The third factor is the neighbourhood facilities. The residents of high cost and medium cost housing show that their neighbourhood facilities are their choice while low cost residents indicate public transport and accessibility as their option. Last dominant factor shows neighbourhood economy for medium and high cost housing residents, while neighbourhood noise factor for low cost housing residents.

CONCLUSION

Generally, most of the residents in Penang Island are moderately satisfied with neighbourhood quality attributes except with cost of living in residents of low cost housing and some items on social interactions features for the three types of SES. The residents of low cost housing show moderately satisfied with dwelling features except washing room and garden areas while residents of medium cost housing shows unsatisfied upon garden area. Residents of low cost housing are unsatisfied under neighbourhood facilities items such as guardhouse services, recreational and children playground, landscape and open space. It seems that three type of SES are not satisfied with facilities for handicapped. In economic aspects, cost of living item is unfavourable to residents of low cost housing compared to residents of medium and high cost housing. In social aspects, the residents' social interaction in all three SES is rather low. The study has found out that social features, dwelling unit features and neighbourhood facilities are the main factors of residents' perception on neighbourhood quality. The findings on the subject would inevitably affect housing market and national housing policies. Therefore, housing policies should take into account the residents' own assessments of their housing neighbourhood and local conditions in order to achieve sustainable urban neighbourhood development.

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