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**Perceptions of the Quality of Life among Low and Medium-Cost
Housing Community in Penang Island, Malaysia**

by

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Abstract

This paper examines perceptions of the Quality of Life (QoL) among households residing in low and medium-cost housing areas in Penang Island, Malaysia. The term QoL is vague and subjective with little consensus on what factors to be included for analysis. Nonetheless, the QoL concept needs to be defined by its components and attributes, which include the subjective dimensions and the objective realities. Literature on the quality of life in cities and neighborhoods have identified several indicators that are believed to represent quality and contributing towards residential satisfaction. City residents have generally voiced concerns about problems caused by unabated growth. The introduction of certain measures of quality of life in urban neighbourhoods may help monitor and gauge the neighbourhood profile and livability. A broader definition of QoL could capture such changes towards improving the quality of life in urban neighbourhoods. This study investigates perceptions of the quality of life among residents living in fifteen urban neighbourhoods in Georgetown and Bayan Lepas, Penang. The study focuses on four aspects of quality of life, namely housing, housing environment, public transport and public safety. Results from a questionnaire survey of 337 respondents revealed that both Georgetown and Bayan Lepas residents were not satisfied with their housing and housing environment. They were unhappy with public transport, and were worried about the level of public safety in their housing areas. Efforts should be undertaken to address these issues to improve the quality of life in these neighbourhoods.

Keywords: quality of life, urban neighbourhood, housing, community

I. INTRODUCTION

Public decision making realm and service delivery in many countries have been influenced by the notions of Quality of Life (QoL). QoL assessment has become a topic of global interest. QoL is perceived as a desirable outcome in the provisions of housing, education, health care and social services, especially for the poor, disabled and elderly. Adverse effects of urbanization and environmental concerns have prompted researchers to focus on the QoL in urban areas. Improving integration in the provision of urban housing and supporting social infrastructures such as schools, community

facilities and child care is essential to serve the new urban residential areas. The provision of facilities that meets the people's expectations would in turn contribute to a better quality of life for the community.

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Literature has highlighted QoL as an ambiguous and difficult concept to define and quantify. Research has approached the QoL concept from varying perspectives, such that subjects of QoL research have ranged widely. Generally, social indicators have been developed to assess the QoL of populations of cities, regions or nations, while social and psychological indicators are used to assess the QoL of individuals or groups of similar characteristics (Malkina-Pykh and Pykh, 2008). QoL is also used interchangeably with other concepts; such as life satisfaction, happiness, well being, health status and living conditions. QoL expresses the idea of overall personal and social well-being that encompasses the domains of life, namely physical, psychological, social, mental, emotional and cognitive dimension.

QoL research is a multi-dimensional frontier in its conceptual and methodological study approach. Although there is general consensus on the meaning of the term quality, implying a sense of satisfaction of the people living within a particular environment, the specific attributes (indicators) and measurements (methodologies) to be adopted have drawn criticisms from various quarters (Turksever and Gunduz, 2001). Specifically, critics have pointed out the lack of theoretical framework in much of the empirical work on QoL (Malkina-Pykh and Pykh, 2008). Nonetheless, various indices of QoL have been developed over the past 30 years in an attempt to measure QoL in many parts of the world (Hagerty et al, 2001).

Based on this scenario, this paper is part of a wider research which aims to measure the quality of life in residential neighbourhoods in the urban areas of northern Malaysia. Specifically, this paper focuses on the case studies of George Town and Bayan Lepas in Penang, Malaysia in order to gauge the perception of the quality of life amongst residents of these housing areas.

2. QUALITY OF LIFE - DEFINITIONS AND CONCEPTUAL MODELS

Quality of Life (QoL) is a complex, multidimensional concept that is difficult to operationalise. Its definition and selection of domains have been primarily dictated by particular research objectives and context. Examples of wide-ranging representative definitions of QoL are shown in Table 1. While these definitions may not be of importance, their implications in terms of underlying theories and hypotheses are very crucial for continuous discussions on the relevant domains, indicators, scale levels and causality (van Kamp et al, 2003).

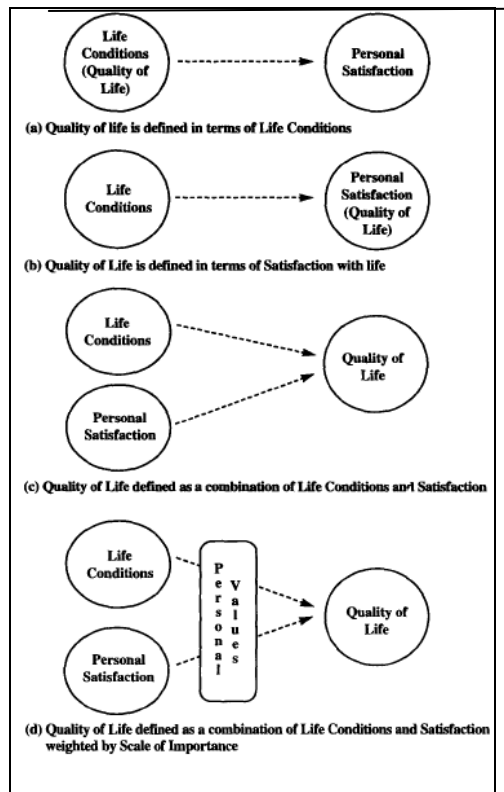
The concept of QoL is strongly rooted in the ideals about health and well being. Based on previous concepts of QoL, Felce and Perry (1995) presented a conceptualisation of the QoL model as shown in Figure 1. According to this model, QoL is a combination of good life conditions and personal satisfaction weighted by particular scales of importance.

Table 1: Some Definitions of Quality of Life (QoL) from Previous Work

Author & Year	Definitions
Szalai (1980)	Degree of excellence or satisfactory character of life. A person's existential, state, well-being, satisfaction with life is determined by (i) the exogenous ('objective') facts and factors of his life, and (ii) the endogenous ('subjective') perception and assessment he has of these facts and factors, of life and himself.
WHO-QOL Group (1993)	Individual's perception of his/her position in life in the context of the culture and value systems in which he/she lives and in relation to his/her goals, expectation, standards and concerns.
Raphael et al (1996)	Degree to which a person enjoys the important possibility of life.
Veenhoven (1996)	Happy life expectancy = product score of his life expectancy (in years) and the mean 'happiness'.
Diener & Suh (1997)	Life satisfaction.
Musschenga (1997)	Combination of enjoyment: positive mental states (the hedonic component), satisfaction: evaluation of success in realizing a life-plan or personal conception of the good life (the cognitive evaluative component) and excellence: the virtuousness or value of a person's activities (arètic component).
Cheung (1997)	Combination of (i) the hedonist good life (life satisfaction, positive/negative affect, depression); (ii) the dialectical good life (mutual interpersonal concern, understanding of others); (iii) the humanist good life (the realization of human potential, self actualising value, autonomy), and (iv) the formalist good life (according to what is right: conformity with moral conventions, religious commitment).
RIVM (2000)	Factual material & immaterial equipment of life and its perception characterised by health, environment, legal, equity, work & family

Source: Quoted and adapted from van Kamp et al (2003)

Figure 1: Conceptualisation of Quality of Life



Source: Felce and Perry (1995)

Taillefer et al (2003) identified 3 types of Quality of Life model, namely:

- Conceptual Model - A model that specifies dimensions and properties of QoL (the least sophisticated type of model).
- Conceptual Framework - A model that describes, explains or predicts the nature of directional relationships between elements or dimensions of QoL.
- Theoretical framework - A model that includes the structure of the elements and their relationship within a theory that explains these relationships (the most sophisticated type of model).

Attempts have also been made to define the attributes of QoL within a conceptual framework as shown in Table 2. Meeberg and Haas each used the process of concept analysis to draw definitions from multidisciplinary review of the concept as used in healthcare. Whilst the World Health Organization (WHO) QoL Group has established an international expert review panel to identify the 3 defining characteristics of QOL.

Table 2: Defining Attributes of Quality of Life

Meeberg (1993)	Haas (1999)	WHOQOL Group (1995)
Feeling of satisfaction with one's life in general	Evaluation of individual's current life circumstances	Subjective - to do with the individual's perception
Mental capacity to evaluate one's life as satisfactory or not	Multidimensional	Multidimensional
Acceptable state of physical, mental, social and emotional health as determined by self	Value based and dynamic	Involves individual's perceptions of both positive and negative dimensions
Objective assessment that a person's living conditions are adequate/not life-threatening.	Comprise subjective and/or objective indicators.	
	Most reliably measured by subjective indicators by self-evaluating person.	

Source: Haas (1999), Meeberg (1993) and WHOQOL Group (1995)

3. QUALITY OF LIFE INDICATORS

From the literature it is established that the domains identified in the QoL definitions may be neutral, positive or negative. This is simply because QoL measures are designed to capture the totality of life experiences, both positive and negative. It is also important as the conceptual models of QoL express the dynamic and interdependent nature of the concept. Schalock and Verdugo (2002) have identified the most common indicators for their 8 core QoL domains, as shown in Table 3.

In planning literature, QoL studies in cities, neighborhoods, retirement communities, and metropolitan areas have identified indicators or attributes that represent quality and contributing towards residential satisfaction (Turkoglu et al, 2006). Some of the commonly used QoL measures are the United Nations Human Development Index by UN Development Programme (UNDP); Worldwide Cost of Living Survey by the Economist Intelligence Unit (EIU); and the Worldwide Quality of Living Survey and Cost of Living Survey, both by Mercer Human Resource Consulting.

Table 3: Indicators and Descriptions for Quality of Life Domains

QoL Domains	Indicators	Descriptions
1. Emotional well-being	Contentment, self-concept, lack of stress	Satisfaction, moods, enjoyment, identity, self-worth, self-esteem, predictability, control

2. Interpersonal relations	Interactions, relationships, support	Social networks, social contacts, family, friends, peers, emotional, physical, financial, feedback
3. Material well-being	Financial status, employment, housing	Income, benefits, work status, work environment, type of residence, ownership
4. Personal development	Education, personal competence, performance	Achievements, status, cognitive, social, practical, success, achievement, productivity
5. Physical well-being	Health, activities of daily living, leisure	Functioning, symptoms, fitness, nutrition, self-care skills, mobility, recreation, hobbies
6. Self-determination	Autonomy/self-control, goals/personal values, choices, integration, participation	Independence, desire, expectation, opportunities, options, preferences
7. Social inclusion	Community roles, social support	Contributor, volunteer, support network, services
8. Rights	Human, legal	Respect, dignity, equality, citizenship, access, due process

Source: Schallock and Verdugo (2002)

In urban planning, QoL provides a proactive approach that complements advocates of sustainable development and smart growth. Comprehensive master planning including development regulations and zoning are tools employed by planners to plan for sustainable living environment for the community. Since most city residents are concerned about problems of uncontrolled growth, traffic congestion, air quality, public safety and loss of community identity, introducing quality of life indicators in urban neighbourhoods would provide a means to monitor and gauge neighbourhoods' profile and livability (Ley, 2005). Hence, a broad definition of QoL is imperative to capture changes in the residents' life including residential history, public services, transportation, taxes, schools, park and recreation, shopping and entertainment, community participation and involvement, neighborhood, housing and residential mobility, safety, employment and journey to work, environment, health care facilities, disposable income, social network and regional issues (Turkoglu et al, 2006).

4. THE MALAYSIAN SCENE

The Malaysian Quality of Life Index (MQLI) developed by the Malaysian Economic Planning Unit highlighted eleven selected components and indicators of QoL as shown in Table 4 (Yap, 2005). While it is noteworthy to have a composite measure or index to track the effects of development in Malaysia from a holistic perspective, the current QoL measure is lacking in its socio-spatial dimension. This shortcoming should be addressed immediately to establish a standard or benchmark of QoL for a typical Malaysian urban neighbourhood.

Table 4: Eleven Components of Malaysian Quality of Life Index (MQLI)

No.	Components	Indicators
1	Income & Distribution	Real per Capita Income Gini Coefficient & Incidence of Poverty
2	Working Life	Unemployment Rate Trade Disputes & Man-Days Lost Due to Industrial Action
3	Transport & Communications	Private Motorcars & Motorcycles Commercial Vehicles & Road Development Index Telephones & Internet Subscribers Average Daily Newspaper Circulation
4	Health	Life Expectancy at Birth & Infant Mortality Rate Doctor-Population Ratio
5	Education	Literacy Rate Pre-school, Secondary School & University Participation Rate Primary School Teacher-Student Ratio Secondary School Teacher-Student Ratio
6	Housing	Average Price of Medium-Low Cost House Per Capita Income % Low-Cost Housing Units to Total Low-Income Households % of Housing Units with Piped Water % of Housing Units with Electricity
7	Environment	Air Quality & Water Quality % Forested Land
8	Family	% Divorces; Crude Birth Rate; Household Size; Juvenile Crime
9	Social participation	Registered Voters Membership in Registered Non-Profit Societies Number of Registered Residents' Associations
10	Public Safety	Crime; Road Accidents
11	Culture and Leisure	Membership in Public Libraries; TV Viewers Domestic Hotel Guests

Source: Yap (2005)

In line with the Global Urban Observatory of UN HABITAT, the Malaysian Urban Indicators Network (MURNI-net) was developed by the Malaysian Town and Country

Planning Department. The MURNI-net system calculates a weighted central index to indicate the relative performance and sustainability of urban settlements based on selected parameters (Zainuddin, 2001). They are demography, housing, urban economy, utility and infrastructure, community facility and recreation, environment, social impact, land use, heritage and urban design, transportation, financial and management (refer Table 5).

Seven cities took part in the MURNI-net pilot study including Pasir Mas, Kuantan, Johor Bharu, Batu Pahat, George Town and Kuching. In the 2006 rating of 39 cities and towns, Malacca scored first place with 82.8%, followed by Kuching North with 78.7% and Kuching South with 76.5%. A rating of 80% and above is sustainable, 50-80% is moderately sustainable, and 50% and below is considered unsustainable (mbks.gov.my/new/bi/yb_council.doc). The research question remains: what are the quality of life measures or indicators that adequately reflect residential satisfaction in a Malaysian urban neighbourhood and how might they be determined?

Table 5: Selected Urban Indicators for Malaysia

No.	Components	Indicators
1	Sustainable Economy & Population	Growth rate, Income level, Unemployment, City product and wealth index, Population growth, Population density and distribution, Population limit for an area, In-migration
2	Poverty Eradication	Proportion of household below poverty line (%), Disposable income, Access to employment opportunity that increases income, Access to social and education facilities, Literacy rate
3	Human Health	Infant and under 5 mortality rate (deaths per 1,000 births), Maternal mortality (deaths per 1,000 births), Life expectancy, Health care facilities (persons/hospital beds)
4	Shelter	House price to income ratio, No. of squatters, House ownership, Median usable living space per person, Housing density, Housing Needs
5	Utilities & Urban Services	Water quality index, Air quality index, Noise level, Population with access to safe water, Population with access to telecommunication, Population with access to sanitation, Frequency water disruption,, Frequency of power failures, Access to public facilities , Access to urban services
6	Transport	Public transport index (eg. Travel time), Road density (km per km ²), Road traffic fatalities (no. per 1,000 people), Walking and cycling facilities distant/time to public transport, Traffic volume (vehicle-km traveled by road)
7	Waste management	Generation of waste-municipal, industrial, hazardous

(tonnes/capita), % Recycling for paper, aluminium, glass.

Source: Zainuddin (2001)

5. CASE STUDY OF PENANG

The Island of Penang was selected for the study because this is one of the rapidly urbanized areas in the northern region of Malaysia. The Penang study involved 15 medium and low-cost housing areas in George Town, the capital city and Bayan Lepas, a growing suburb (refer Table 6). A 5% neighbourhood sample was adopted and the respondents were chosen based on careful selection of the attributes of these neighbourhoods. The survey was conducted during January and February 2008.

Table 6: Names of Selected Neighbourhood Areas and Sample Sizes

George Town (5 neighbourhoods)	Total Households	Sample Size
1. Halaman Damai (built 1993) has 3 blocks of 409 units. Unit size: 650 sq.ft. with 2 or 3 bedrooms. Residents: Chinese (60%), Malays (35%), Indian (5%).	409	23
2. Ghaut Lebu Maccallum Flat (built 1990) has 1,056 units. Unit size 500–700 sq ft. Residents:95% Chinese.	1,056	51
3. Kompleks Pulau Mutiara (built 2003) has 540 units. Unit size: 500 sq.ft. with 3 bedrooms. Residents: Chinese (85%) &Indians (15%).	540	26
4. Taman Abidin (built 1975) has 5 blocks of 300 units. Unit size:500 sq.ft with 2 bedrooms. Residents: Indian Muslim (75%), Malay (25%).	300	15
5. Taman Nusantara (built 1972) has 306 units. Unit size: 600 sq. ft. with 2 bedrooms. Residents: Indian Muslim/Malays (90%), Chinese (10%).	306	18
Sub-TOTAL	2,611	133 (39.5%)
Bayan Lepas (10 neighbourhoods)	Total Households	Sample Size
1. Desa Bistari (built 1996) has 4 blocks of 410 units. Unit size: 700 sq.ft. with 3 bedrooms.	410	21
2. Desa Muhibbah is a 19-storey apartment with 256 units. Unit size: 700 sq.ft.with 3 bedrooms.	108	6
3. Desa Mutiara Indah (built 1987) consists of a 9-storey building of 108 units. Unit size: 575 sq.ft with 2 bedrooms. Residents: Majority Malays	108	6
4. Desaria Sri Merpati Flat has 6 blocks of 653 units. Each unit has 2 or 3 bedrooms.	653	22
5. PDC Flat Bayan Baru has 980 units at Lorong Mahsuri (300 units), Solok Mahsuri (65 units), Lebu Mahsuri	980	45

(250 Units) & Lengkok Mahsuri (356 units). Residents: Malays (50%), Chinese (30%) and Indians (20%).		
6. Pusat Bayan is shophouse. Residents: Chinese (60%)	384	19
7. Taman Alor Vista (built 2002) has 1,120 units of residence in 4 blocks. Residents: Chinese (60%), Malays (35%) and Indians (5%). There are many inhabited houses.	1,122	57
8. Taman Gembira. Residents: Malay (50%), Chinese (30%) and Indian (20%).	162	8
9. Taman Mas (built 1989) is a low cost flat of 2 blocks and 102 units. Residents: Chinese (60%), Malay (30%) and Indians (10%).	119	6
10. Taman Mewah. Residents: Malay (50%), Chinese (30%) and Indian (20%).	280	14
Sub-TOTAL	4,326	204 (60.5%)
TOTAL	6,737	337 (100%)

Source: Fieldwork by Planning Studio 300 (2008)

During the survey, questionnaires were distributed to a total of 337 respondents (heads of households) residing in these 15 neighborhoods. The key questions posed to the head of households in this survey relate to four domains of QoL, namely housing condition, housing environment, public transport and public safety.

6. ANALYSIS AND FINDINGS

Analysis and findings are categorised into five sections, namely income, housing, housing environment, public transport, and public safety.

Income: The distribution of income levels of respondents (refer Table 7) revealed that households in Bayan Lepas were earning less than the George Town residents. This shows that people residing in George Town were relatively well-off

Table 7: Respondents' Income Level in George Town and Bayan Lepas

Place	Income < RM1K	Income 1K-1,999	Income 2K-2,999	Income 3K-3,999	Income 4K-4,999	Income 5K+	Total
George Town	7.5	27.5	27.5	17.5	17.5	10.5	100%
Bayan Lepas	16.9	28.8	27.1	17.0	3.4	6.8	100%
Total	12.2%	28.2%	27.3%	17.3%	10.5%	0.65%	100%

Housing: Analysis found that over 70% of households owned their present housing units in George Town and Bayan Lepas areas. Regarding the length of stay, 41.9% of George Town residents had stayed in their present housing for less than 6 years, while 54.1% of Bayan Lepas residents had stayed in their present housing for the same period.

The major reasons why George Town respondents had chosen to stay at their current housing are the strategic location of George Town (38%) and being close to work place (24%). As for the Bayan Lepas residents, 40.9% of the respondents stated the same reason of being close to their work place and another 22.3% mentioned about the affordable rent/price. This finding relates to the fact that Bayan Lepas respondents were earning less than George Town residents.

Despite having owned their housing units, 44.2% of George Town residents and 43.2% of Bayan Lepas residents were contemplating moving out of their current housing and staying elsewhere. The most common complaints among the residents were the noise level, lack of privacy and preference for landed property. This finding shows that the residents were generally unhappy with their current housing units.

Housing Environment: The respondents were asked to state their level of satisfaction regarding several aspects of their housing units and the relationship with the neighbours. From Table 8, the level of satisfaction among the residents are not favourable, especially on high noise level, inadequate space and poor air quality/haziness. This finding concurs well with the residents' intention to move out of the area if given the opportunity.

Table 8: Respondents' Satisfaction with Housing and Neighbourhoods (%)

Housing Aspects	George Town (% Satisfied)	Bayan Lepas (% Satisfied)	Average (% Satisfied)
Natural Ventilation	59.7	52.7	55.3
Natural Lighting	62.0	57.7	59.3
Noise Level	34.1	40.4	38.1
Privacy	46.5	54.1	51.3
Adequate Space	37.2	45.0	42.1
Air Quality/Haziness	35.9	48.6	42.3
Neighbourliness	66.7	61.8	63.6

Public Transportation: A majority of respondents (82.8%) in George Town and Bayan Lepas had traveled to work and school by private vehicles due to ease and convenience. Some 66.7% of respondents would like some form of improvements in the provision of public transport in their areas. In terms of parking, both residents had complained of insufficient parking space, 55% in George Town and 46% in Bayan Lepas, respectively. Traffic congestion was another issue highlighted by 69% of George Town respondents and 51% of Bayan Lepas respondents. It is clear that the residents were very unsatisfied with the state of public transport in their area.

Public Safety: In terms of crime and public safety, 23% of all respondents reported that they had been victims of crime in their housing areas. Another 83% of respondents said they had felt safe walking alone at night in their neighbourhoods. This is especially true among the Bayan Lepas residents (56.7%) as compared to the George Town residents (43.3%). This finding shows that crime is generally still under control in these areas.

Results from the survey showed that all is not well in the low-cost and medium-cost housing in George Town and Bayan Lepas areas. Efforts must be geared to address these issues so that the residents of these neighbourhoods would be able to lead a healthy and quality life.

7. CONCLUSIONS

This paper has examined four important aspects of quality of life as perceived by the residents of low-cost and medium-cost housing areas of George Town and Bayan Lepas, Penang. This pioneer study has included only four selected aspects of QoL, namely housing, housing environment, public transport and public safety. Overall, the study found that the residents of George Town and Bayan Lepas were unhappy with their housing units, the surrounding environment and public transport, and they were thinking of moving elsewhere if given the chance. This study has revealed that some aspects of good quality of life were missing in the residential areas of George Town and Bayan Lepas and this situation needs to be rectified in the interests of the people.

Work is underway to refine and revise the questionnaire used in the pilot study and to incorporate several other QoL aspects which are considered important in this research. It is hoped that the research outcome would ultimately benefit the local community as

well as the local authorities concerned in establishing the indicators of quality living in the Malaysian urban neighbourhoods.

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