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DETERMINANT FACTORS OF NEIGHBOURHOOD QUALITY

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Abstract

The basic concept of neighbourhood refers to a physical boundary where people lead their private lives. Neighbourhood is about physical environment, economy and social which constitute the sense of community and place attachment. The development and neighbourhood changes for urban renewal, urban regeneration and redevelopment are to fulfil the people's needs and requirements. The neighbourhood changes are required to improve the neighbourhood conditions such as neighbourhood quality, liveable neighbourhood, healthy neighbourhood, sustainable neighbourhood, dynamic and self-stabilising neighbourhood, safe neighbourhood and better neighbourhood. All of these are shared towards people's well-being, health, safety and sustainable communities. This article looks into the multivariable influences in the provision of neighbourhood quality for the residents' needs in their housing and neighbourhood area. Previous research had explained three multivariable factors that influenced the quality of neighbourhood namely physical, social and economic aspects. The physical aspects were examined in four categories namely dwelling unit, facilities and services, accessibility and surrounding environment. The social aspects were classified as socio-demographic, social community and social interaction and place attachment. The economic aspect focused on the socio-economic of the residents.

Keyword: Neighbourhood, Neighbourhood Quality, Physical Factors, Social Factors, Economic factors.

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INTRODUCTION

The basic concept of neighbourhood is known as a delineated area within physical boundaries where people identify their home and where they live out and organise their private lives. There are both physical and psychological barriers between neighbourhoods such as a road or the tenure of the housing, or the social composition of residents (Power, 2004). Theodori (2001) mentions that a neighbourhood is the satisfaction and attachment of a community which have various social and demographic factors associated with ones' well-being. A neighbourhood is also known as a place-based community to support an argument that a neighbourhood is an appropriate spatial scale for understanding the operation of 'everyday life-worlds' (Meegan & Mitchell, 2001). According to Jones (2001) and Leby and Hashim (2010), a neighbourhood is a sense of community and quality of life. It is a promoted liveable neighbourhood by comparing the conventional suburban and traditional urban development. It also includes social embeddedness, sense of community, satisfaction with the neighbourhood, and sensed crime (Martinez, Black, & Starr, 2002). Urban neighbourhood is a place of attachment and has a community sentiment. The concept of place is conceptualised in terms of the setting in which social relations are constituted, the effects upon locales of social and economic processes and the creation of a sense of place (Corcoran, 2002). Neighbourhoods can be defined and created through social interactions and particular actions which often conflict and the ideal of neighbourhood asserts a role for the "local" in a world increasingly characterized by extra-local interactions and exchanges (Martin, 2003). The neighbourhood is an urban quality environment and human well-being where the specification of life concerns and determination of how reactions to them have to combine to predict people's sense of overall life quality (Pacione, 2003).

The improvement or upgrading in a neighbourhood is a continuous process for the need and requirement of its residents. People's perception is required to evaluate the urban quality environment elements in the neighbourhood change. The combination of elements of urban quality environment and people's perception will create the environment of a liveable city and for the people's well-being. The wide range of elements need to be satisfied such as social, economic and environment (Pacione, 2003). A neighbourhood has to be a settlement which is viewed holistically, being not simply the physical place but the people that live there, their activities, their social networks, the economy they depend on, and the broader base of environmental capital that supports them. It is the settlement as a living, breathing, changing thing as a local ecosystem within the global ecosystem

(Barton, 2005, 2009). According to Blum and Grant (2006), a neighbourhood is self-stabilising or dynamic in terms of economic and socio-economic measures including rates of tax delinquency, low-weight births, teenage births and home sales volumes. Other measurements used for self-stabilising neighbourhood are violent and property crime rates (Galster, Cutsinger, & Lim, 2007). The better neighbourhood will have reduced stress, greater feelings of safety and neighbourhood satisfaction, and employment, the increased of economic self-sufficiency and reduced dependence on social services (Goetz, 2010). A safe neighbourhood is safe from crime. There are two types of crime safety. First, objective safety pertains to victimization, that is, the measurable recorded experience of becoming a victim of a criminal act. Second, subjective safety concerns with the assessment by residents of the local crime and nuisance rate, and the extent to which they feel safe, particularly in their own neighbourhoods (Leerkes & Bernasco, 2010). The neighbourhood quality is about the adequacy of physical, social and economic aspects and satisfaction by the residents in the their residential and neighbourhood area (Kim, Nair, Knight, Roosa, & Updegraff, 2008; Scorbureanu & Scorbureanu, 2012).

As a conclusion, a neighbourhood is a place where the residents and community are associated with land uses and amenities. The sense of community is related to the sense of place and sense of attachment. The people, as a community in the neighbourhood, have different socio-economic and socio-demographic backgrounds that reflect the neighbourhood characteristics and preferences. Nowadays, the basic concept of neighbourhood has changed to become more practical in life. The neighbourhood regeneration, revitalisation, urban renewal and development are used in upgrading and improving the neighbourhood condition in terms of physical, social and economic. Recently, the most used neighbourhood terms are neighbourhood quality, liveable neighbourhood, better neighbourhood, sustainable settlement and neighbourhood, dynamic and self-stabilising neighbourhood and safe neighbourhood. All these terms are towards the residential and neighbourhood satisfaction which affects the individual quality of life, human well-being, health, safety and sustainable communities. Each neighbourhood term has its own definition and criteria to fulfil the residents' needs and requirements. This paper focuses on the neighbourhood quality to determine the criteria and characteristics of the neighbourhood quality.

NEIGHBOURHOOD QUALITY

The literature reviews in determining the neighbourhood quality are taken from previous research on residential and neighbourhood environment. Most research on residential and neighbourhood environment deal with physical factors (Fornara, Bonaiuto, & Bonnes, 2010; Lovejoy, Handy, & Mokhtarian, 2010; Mohit, Ibrahim, & Rashid, 2010) social factors (Aiello, Ardone, & Scopelliti, 2010; Erkip, 2010; Rogers & Sukolratanametee, 2009) and economic factors (Lotfi & Koohsari, 2009; Serrano, 2009). Basically, the neighbourhood quality is influenced by neighbourhood attributes, home attributes and jurisdictional attributes (Greenberg & Crossney, 2007). The neighbourhood quality is also associated with social capital, security and adequacy of facilities (Yang, Yang, Shih, & See, 2002). The neighbourhood quality is about the environment condition and the residents' characteristics (Greenberg, 1998). As mentioned earlier, the neighbourhood quality is related to the physical, social and economy aspects in the residential and neighbourhood area (Kim, et al., 2008; Scorbureanu & Scorbureanu, 2012). Most previous research used multivariable elements in evaluating the neighbourhood quality. These aspects are important in the provision of adequate and sufficient facilities in the neighbourhood quality for the residents' necessities and requirements. There are three main factors that influence the neighbourhood quality. The factors are physical factors, social factors and economic factors. A detailed discussion of each multivariable factor used in the previous studies will be discussed further in the next section.

The Physical Factors

Most of the researchers use multivariable for physical factors. Aiello et al. (2010) use the functional and environment aspects such as architectural and town-planning features, services and facilities, crime and security as physical multivariable factors. Lovejoy et al. (2010) use attractiveness, quiet, liveliness, big yards, safety, mixed-use and good infrastructure in evaluating the physical attributes. Mohit et al. (2010) apply physical factors on the environment aspects such as noise level, accident situation, crime situation, security control and community relations as well as the public facilities and the distance of neighbourhood facilities provided. Whereas, Bonaiuto et al. (1999; 2003; 2006) utilize other physical elements related to architectural and urban planning space such as the organization of accessibility and roads, green areas, welfare services, recreational services, commercial services, transport services, environmental health and upkeep. Hur, Nasar and Chun (2010) develop other physical measures used in influencing the neighbourhood quality such as the

attributes of the surrounding environment, perceived attributes of the environment and evaluation of the attributes of the surrounding environment.

Serrano (2009) is concerned with the physical factors influencing the provision of neighbourhood quality such as noise, pollution, environmental problems and crime or vandalism. Lotfi and Koohsari (2009) evaluate the accessibility to public spaces such as to local parks, the stores and elementary schools. Rogers and Sukolratanametee (2009) take into account the physical factors that are well-defined centre and edge, mixed-use of household and land uses, density of neighbourhood and lot sizes, pedestrian walkways that are friendly in terms of distance and networking, and accessibility to public spaces and open spaces. Zhao (2009) considers the physical factors in spatial aspects such as architectural-planning space, organization and accessibility of space, green space. The physical factors measured in functional aspect are welfare, recreational, commercial, transport services. The physical factors used in contextual aspects are pace of life, environmental health and upkeep. Apparicio, Se'guin and Naud (2008) use the physical attributes like housing density, cultural facilities, educational facilities, health services and facilities, sport and recreational facilities, bank services and other facilities in their studies. Salleh (2008) evaluates other physical components that affect residents' satisfaction including services by the developers, neighbourhood facilities and environment. Karim (2008) quantifies the physical factors of community facilities with education, grocery shopping, eating, recreation, praying and medical services. Tu and Lin (2008) measure the physical attributes such as density, environmental health, greenness, and subjective attributes such as crowding, security and social relations. In addition, the behavioural perfectives include residential mobility, maintenance of house and neighbourhood, good relations with neighbours and participation in neighbourhood activities.

Gbakeji and Magnus (2007) evaluate the physical structure of the neighbourhood residence in terms of nature, mix and intensity of land use such as neighbourhood topography, drainage and microclimate, housing density, land use compatibility, neighbourhood flood level, vehicular traffic, open spaces and playgrounds. Greenberg and Crossney (2007) perceive physical neighbourhood attributes as crime, blight, odours, recreation, heavy traffic, parks and schools. The perceived jurisdictional attributes assessed are such as elected officials, schools and other services. Ge et al. (2006) and Ge & Hokao (2004) assess the physical attributes for the neighbourhood quality that include convenience with transportation and social services, amenity with natural environment, historical environment and living spaces, health with water environment, sound environment, air environment and other pollutions, safety from disaster, with

transportation and from crime and facilities in the community. Lee et al. (2006) and Ogu (2002) measure the environmental factors in the neighbourhood quality namely neighbourhood condition, access road, storm-water drains, maintenance of environmental facilities, collection of refuse and street lighting. H. Hashim (2005), Omar (2008), Westaway (2006) and Yang et al. (2002), consider the adequacy of public facilities and community facilities to persuade the neighbourhood quality in physical attributes. Chau et al.(2006) and Lee, Ellis, Kweon and Hong (2008) assess the landscaping element provided as a good quality environment of the housing and neighbourhood area in physical issues. Generally, multivariable features are used for the physical factors in evaluating and assessing the neighbourhood quality in most previous research. Based on previous research, the physical factors can be divided into four categories which are facilities and services, dwelling, surrounding environment and accessibility. The facilities and services involve the adequacy and maintenance of social, recreational and educational facilities such as sports, recreational and spare-time facilities; parks, play grounds, green areas, and elementary schools, greenery, naturalness and openness, trash collection and street lighting etc. The dwelling features are room size, bathroom size, kitchen size, total usable area of the dwelling etc. The surrounding environment would be noise, crowd, air pollution, safety etc. Lastly, accessibility is the convenience to the city centre, work place, health service and availability of shopping facilities and municipal services etc.

The Social Factors

Social factors that influence neighbourhood quality are the residents' demographic backgrounds, community interaction and place attachment. Many researchers use the socio-demographic variable to evaluate the residents' satisfaction perception on their housing and neighbourhood area. Different socio-demographic will give different individual data in the housing and neighbourhood area (Apparicio, et al., 2008). The socio-demographic backgrounds used by Aiello et al. (2010) and Erkip (2010) are gender, age, income, tenure, length of residence. Aiello et al. (2010) utilise socio-demographic indicators that involve persons living together, families composed of one member, families composed of four members or more, widows or widowers. Lovejoy et al. (2010) exercise the level of education as part of socio-demographic backgrounds. Lee (2008) uses variables such as age, education, health, and marriage status in the residents' satisfaction perception. Rogers and Sukolratanametee (2009) use socio-demographic factors like gender, age, number of children, household size, level of education and race. Tu and Lin (2008) use personal characteristics such as age and gender that are effective

'predictors' of residential satisfaction. Barton (2009) uses other socio-demographic variables namely culture and ethnicity.

Community interaction in housing and neighbourhood area is one of the social factors influencing the residents' satisfaction in neighbourhood quality. Aiello et al. (2010) use community interaction variables that are related to social relation features and context features. Social relation features involve psychology aspects. On the other hand, context features involve environment aspects. Mohit et al. (2010) use the relationship of the residents and the environment in their housing and neighbourhood area for the community interaction. Bonaiuto et al. (1999), Bonaiuto et al. (2003, 2006) and Fornara et al. (2010) use variables like social relational features and pace of life for the community interaction. Rogers and Sukolratanametee (2009) use the length of residency and expected years to live in a neighbourhood to evaluate the community interaction in the housing and neighbourhood area. Zhao (2009) uses the social interaction in evaluating the human aspects that influence the neighbourhood quality. Gbakeji and Magnus (2007) include social relationship variables related to the nearness to friends and relations, suitability of neighbourhood for raising children, compatibility of neighbours, level of crime and other social vices to represent the social dimension of the residential environment. Ge and Hokao (2004, 2006) and Ge, et al. (2006) incorporate social with the convenience of daily life and community. Yang, et al. (2002) integrate social factors as participating in activities together and feeling happy with the neighbourhood. The final social factor influencing the neighbourhood quality is place attachment. Not many researchers evaluate place attachment in their studies. Zhao (2009) uses place attachment as a residential attachment. The residential attachment variables used in evaluating the neighbourhood quality are being away, fascination extend and compatibility. Bonaiuto et al. (1999), Bonaiuto et al. (2003, 2006) and Fornara et al. (2010) use variable such as neighbourhood attachment in measuring the neighbourhood quality.

The Economic Factors

The economic factors involved in the provision of neighbourhood quality are residents' socio-economic backgrounds and economic value in the neighbourhood. Socio-economic includes income and homeownership (Erkip, 2010). The socio-economic aspect also involves the residents' employment, dependence index and old age index (Aiello et al., 2010). The aspect also includes the annual household income and household size (Lovejoy, et al., 2010). It's also taking into consideration the individual characteristics such as health, migration, labour situation, income, and household characteristics which

are incorporated with the duration of residence, annual income, household size and housing costs artificial the condition of neighbourhood quality (Serrano, 2009). The socio-economic inequalities consist of level of income, unemployment rate, private car ownership and the quality of buildings (Lotfi & Koohsari, 2009). Additional socio-economic factors are home ownership, transport ownership, household income, work within community and full-time homemaker (Rogers & Sukolratanametee, 2009).

EXPERIENCES IN MALAYSIA

A lot of research has been done in Malaysia on neighbourhood quality to ensure a good quality of life. A. H. Hashim (2003) uses physical, social and economic attributes to evaluate the residential satisfaction and social integration at low-cost housing in Selangor. The physical aspects included in the multivariable are the location of the residential, residential satisfaction, housing satisfaction and neighbourhood satisfaction. The social aspects are the residents' socio-demographic backgrounds and residential attachment. The economic aspects depend on the residents' socio-economic backgrounds. H. Hashim (2005) applies physical and social attributes to assess harmonious community living in an urban neighbourhood in Shah Alam. The physical aspects encompass secondary schools, primary schools, Islamic primary schools, public kindergartens, mosques, 'surau' (small mosque), community halls, fields and playgrounds, open spaces and recreational areas and community programs. Salleh (2008) utilises the physical features at low-cost housing in Penang and Terengganu. The physical features integrated in the study are the three main variables for the research namely dwelling features, services and facilities. The dwelling units involve the living area, kitchen area, dining room area, bedroom area, washing room area, room arrangement, air circulation, number of socket, level of socket, clothes line facilities, garbage line and noise. As for services, they include pipe repairs, electrical wiring, water supply, garbage disposal and safety. The facilities comprise preschool, primary school, secondary school, clinic or hospital, telephone, market, children's playground, public transport, parking lot, place of worship, community hall, and facilities for handicapped, police station, fire brigade and nursery. Karim (2008) evaluates the residents' satisfaction on community facilities at low-cost public housing in Shah Alam, Selangor. The physical attributes employed are kindergarten, primary school, secondary school, children playground, playing fields, grocery shops, mini markets, food stalls, restaurants, private clinics, government clinics, 'surau', mosque, community hall, public phone.

Omar (2008) measures communal living at low-cost housing in Malaysia by using physical elements. The physical elements are schools, playing fields, religious centres, community halls, recreation areas and libraries while the community facilities include secondary and primary schools, community hall, religious centre, business area, shop lots, terminal bus and open spaces. Omar (2009) assesses the residents' satisfaction at 10 new towns in Malaysia on physical, social and economic aspects. The physical aspects are religious centres, electricity supply, water supply telephone service, primary schools, secondary schools, open space facilities, children's playgrounds, commercial service, entertainment centres and public transport services. The economic aspect is based on the price of the house and rental value. The social aspects are their feeling about living in new towns, feeling safe and safety of property and the beauty of the surrounding area. Mohit et al. (2010) evaluate residential satisfaction in a newly designed public low-cost housing in Kuala Lumpur, Malaysia in terms of the physical features. The physical features focus on five main variables which are dwelling unit features, dwelling unit support services, public facilities, social environment and the distance to the neighbourhood facilities. The dwelling unit comprises living area, dining space, kitchen space, bedroom-1, bedroom-2, bedroom-3, toilet, bathroom, dry area, socket, and house ventilation. The dwelling unit support services include corridor, staircase, and lift, fire fighting, cleanliness of drain, street lighting, garbage collection and cleanliness of garbage house. The public facilities look into the open space or play area, car or motorcycle parking, prayer hall, multi-purpose hall, perimeter road, pedestrian walkways, public phone, local shops, and food stalls. The social environment stresses on noise level, accident situation, crime situation, security control and community relations. The neighbourhood facilities evaluate the distances to the nearest town centre, work place, school, police station, hospital, shopping centre, market, public library, worship building, Light Railway Transit (LRT) Station, bus station and fire station.

Leby and Hashim (2010) quantify the residents' perception on neighbourhood liveability attributes at Subang Jaya Municipal Council neighbourhood by making use of physical and social attributes. The Physical attributes are the maintenance of streets, rubbish collection service, ground vibration by traffic, noise by heavy traffic, maintenance of open spaces, and upkeep of neighbourhoods' lighting. The social attributes are the behaviour of neighbours, relationship with neighbours, sociability of people, sense of community, cordiality of people, and friendship with people and close distance to friends. Mohit and Nazyddah (2011) evaluate the residents' satisfaction on social housing programme in Malaysia by using the physical and social features.

The physical features are housing unit, housing unit support, public facilities, and social environment and neighbourhood facilities. The economic feature is the household characteristic of the residents. Karim (2012) examines the quality of life for the lower income residents in planned housing areas in Shah Alam Selangor on the physical and social components. The physical components are the community facilities environment and the neighbourhood physical environment. The social components are the family domain and the social environment. Tan (2012) evaluates the housing satisfaction in medium and high cost housing in Kuala Lumpur by utilizing the physical and economic elements. The physical elements are housing characteristic and housing delivery system. The economic elements are homeownership and socio-economic characteristic. Salleh (2012) assesses the residential satisfaction in Terengganu and Penang by concentrating on the physical features. The physical features are the dwelling unit, services by the developers and neighbourhood facilities. Another study of the household study in an urban area in Penang measures the residents' satisfaction on physical, social and economic features.

CONCLUSION

Many researchers have expended their research using the multivariable to suggest the criteria for a good neighbourhood quality. Previous research has shown that the neighbourhood quality can be influenced by physical, social and economic factors. Physical factors can be divided into four categories namely dwelling unit, facilities and services, accessibility and surrounding environment. The physical aspects are evaluated by the adequacy, amenity, attractive, convenience, defensible space, good infrastructure, homogeneity, immediate, maintenance, pedestrian friendly, quiet, upkeep, well-defined, accessibility, location, distance, nearness, safety, security, crowding, noise, odours, environmental health and natural environment. The social factors can be separated in terms of socio-demographic, social community and place attachment. The socio-demographic of the residents will influence social community and social interaction. Social community comprises community organization, human aspects and social relationship. While place attachment consists of neighbourhood and residential attachment, neighbourhood and residential context, neighbourhood and residential social setting, social image of neighbours, social environment, social formation, social welfare, pace of life, safety community and liveliness. The economic factors on the other hand, are related to the residents' socio-economic profile background.

REFERENCES

Aiello, A., Ardone, R. G., & Scopelliti, M. (2010). Neighbourhood Planning Improvement: Physical Attributes, Cognitive and Affective Evaluation and Activities in Two Neighbourhoods in Rome. *Evaluation and Program Planning*(33), 264-275.

Apparicio, P., Se´guin, A.-M., & Naud, D. (2008). The Quality of the Urban Environment Around Public Housing Buildings in Montre´al: An Objective Approach Based on GIS and Multivariate Statistical Analysis. *Social Indicators Research, 86*, 355-380.

Barton, H. (2005). A Health Map for Urban Llanners Towards a Conceptual Model for Healthy, Sustainable Settlements. *Built Environment, 31*(4).

Barton, H. (2009). Land Use Planning and Health and Well-Being. *Land Use Policy*, (26S), S115-S123.

Blum, A., & Grant, M. (2006). Sustainable Neighbourhoods: Assessment Tools for Renovation and Developmen. *Journal of International Research Publications: Ecology and Safety, 1*, 37-54.

Bonaiuto, M., Aiello, A., Perugini, M., Bonnes, M., & Ercolani, A. P. (1999). Multidimensional Perception of Residential Environment Quality and Neighbourhood Attachment in the Urban Environment. *Journal of Environmental Psychology*(19), 331-352.

Bonaiuto, M., Fornara, F., & Bonnes, M. (2003). Indexes of Perceived Residential Environment Quality and Neighbourhood Attachment in Urban Environments: A Confirmation Study on the City Of Rome. *Landscape and Urban Planning*(65), 41-52.

Bonaiuto, M., Fornara, F., & Bonnes, M. (2003). Indexes of Perceived Residential Environment Quality and Neighbourhood Attachment in Urban Environments: A Confirmation Study on the City Of Rome. *Landscape and Urban Planning*, (65), 41-52.

Bonaiuto, M., Fornara, F., & Bonnes, M. (2006). Perceived Residential Environment Quality in Middle and Low-Extension Italian Cities. *Revue Européenne De Psychologie Appliquée*(56), 23-34.

Bonaiuto, M., Fornara, F., & Bonnes, M. (2006). Perceived Residential Environment Quality in Middle and Low-Extension Italian Cities. *Revue Européenne De Psychologie Appliquée*, (56), 23-34.

Chau, C. K., Yung, H. K., Leung, T. M., & Law, M. Y. (2006). Evaluation of Relative Importance of Environmental Issues Associated With a Residential Estate in Hong Kong. *Landscape and Urban Planning*(77), 67-79.

Corcoran, M. P. (2002). Place Attachment and Community Sentiment in Marginalised Neighbourhoods: A European Case Study. *Canadian Journal of Urban Research, 11*(1), 201-221.

Erkip, F. (2010). Community and Neighborhood Relations in Ankara: An Urban–Suburban Contrast. *Cities,* (27), 96-102.

Fornara, F., Bonaiuto, M., & Bonnes, M. (2010). Cross-Validation of Abbreviated Perceived Residential Environment Quality (PREQ) and Neighborhood Attachment (NA) Indicators. *Environment and Behavior, 42*(2), 171-196.

Galster, G., Cutsinger, J., & Lim, U. (2007). Are Neighbourhoods Self-stabilising? Exploring Endogenous Dynamics. *Urban Studies, 44*(1), 167-185.

Gbakeji, J. O., & Magnus, O. O. (2007). Aspects of Residential and Neighbourhood Preferences in the Warri Metropolis, Delta State, Nigeria. *Studies Home Communication Science, 1*(12), 121-126.

Ge, J., Chen, F., Wang, J., & Hokao, K. (2006). *Residential Environment Evaluation Model Considering Residential Preference in Changjiang Delta Region of China.* Paper presented at the International Symposium of Lowland Technology.

Ge, J., & Hokao, K. (2004). Residential Environment Index System and Evaluation Model Established by Subjective and Objective Methods. *Journal Of Zhejiang University Science, 5*(9), 1028-1034.

Ge, J., & Hokao, K. (2006). Research on Residential Lifestyles in Japanese Cities from the Viewpoints of Residential Preference, Residential Choice and Residential Satisfaction. *Landscape and Urban Planning,* (78), 165-178.

Goetz, E. G. (2010). Better Neighborhoods, Better Outcomes? Explaining Relocation Outcomes in HOPE VI. *A Journal of Policy Development and Research, 12*(1), 5-32.

Greenberg, M. (1998). Age, Perceptions, and Neighborhood Quality: An Empirical Test. *Human Ecology Review, 5*(2), 10-18.

Greenberg, M., & Crossney, K. (2007). Perceived Neighborhood Quality in the United States: Measuring Outdoor, Housing and Jurisdictional Influences. *Socio-Economic Planning Sciences,* (41), 181-194.

Hashim, A. H. (2003). Residential Satisfaction and Social Integration in Public Low Cost Housing in Malaysia. *Pertanika Journal Social Science & Huminities, 11*(1), 1-10.

Hashim, H. (2005). *Harmonious Community Living in Urban Neighbourhoods: A Case of Central Shah Alam.* Paper presented at the 8th International Conference of the Asian Planning Schools Association.

Hur, M., Nasar, J. L., & Chun, B. (2010). Neighborhood Satisfaction, Physical and Perceived Naturalness and Openness. *Journal of Environmental Psychology*(30), 52-59.

Jones, E. J. (2001). Liveable Neighbourhoods. *World Transport Policy & Practice, 7*(2), 38-43.

Karim, H. A. (2008). The Satisfaction of Residents on Community Facilities in Shah Alam, Malaysia. *Asian Social Science, 4*(11), 131-137.

Karim, H. A. (2012). Low Cost Housing Environment: Compromising Quality of Life? *Procedia - Social and Behavioral Sciences, 35*, 44-53.

Kim, S. Y., Nair, R., Knight, G. P., Roosa, M. W., & Updegraff, K. A. (2008). Measurement Equivalence of Neighborhood Quality Measures for European American and Mexican American Families. *Journal Community Psychology, 37*(1), 1-20.

Leby, J. L., & Hashim, A. H. (2010). Liveability Dimensions and Attributes: Their Relative Importance in the Eyes of Neighbourhood Residents. *Journal of Construction in Developing Countries, 15*(1), 67-91.

Lee, L. M., Abdullah, A., Tan, S. F., Badrulzaman, N., & Hassan, A. S. (2006). How We Failed to Plan for Habitatability. *Journal of the Malaysian Institute of Planners, 4*, 1-21.

Lee, S. W., Ellis, C. D., Kweon, B. S., & Hong, S. K. (2008). Relationship between Landscape Structure and Neighborhood Satisfaction in Urbanized Areas. *Landscape and Urban Planning, 85*, 60-70.

Lee, Y. J. (2008). Subjective Quality of Life Measurement in Taipei. *Building and Environment*(43), 1205-1215.

Leerkes, A., & Bernasco, W. (2010). The Spatial Concentration of Illegal Residence and Neighborhood Safety. *Journal of Urban Affairs, 32*(3), 367-392.

Lotfi, S., & Koohsari, M. J. (2009). Measuring Objective Accessibility to Neighborhood Facilities in the City (A Case Study: Zone 6 in Tehran, Iran). *Cities, 26*, 133-140.

Lovejoy, K., Handy, S., & Mokhtarian, P. (2010). Neighborhood Satisfaction in Suburban versus Traditional Environments: An Evaluation of Contributing Characteristics in Eight California Neighborhoods. *Landscape and Urban Planning, 97*, 37-48.

Martin, D. G. (2003). Enacting Neighborhood. *Urban Geography, 24*(5), 361-385.

Martinez, M. L., Black, M., & Starr, R. H. (2002). Factorial Structure of the Perceived Neighborhood Scale (PNS): A Test of Longitudinal Invariance. *Journal of Community Psychology, 30*(1), 23-43.

Meegan, R., & Mitchell, A. (2001). 'It's Not Community Round Here, It's Neighbourhood': Neighbourhood Change and Cohesion in Urban Regeneration Policies. *Urban Studies, 38*(12), 2167-2194.

Mohit, M. A., Ibrahim, M., & Rashid, Y. R. (2010). Assessment of Residential Satisfaction in Newly Designed Public Low-Cost Housing in Kuala Lumpur, Malaysia. *Habitat International*(34), 18-27.

Mohit, M. A., & Nazyddah, N. (2011). Social Housing Programme of Selangor Zakat Board. *Journal Housing and the Built Environment, 26*, 143-164.

Ogu, V. I. (2002). Urban Residential Satisfaction and the Planning Implications in a Developing World Context: The Example of Benin City, Nigeria. *International Planning Studies, 7*(1), 37-53.

Omar, D. (2008). Communal Living Environment in Low Cost Housing Development in Malaysia. *Asian Social Science*, (10), 98-105.

Omar, D. (2009). Assessing Residents' Quality of Life in Malaysian New Towns. *Asian Social Science, 5*(6), 94-201.

Pacione, M. (2003). Urban Environmental Quality and Human Wellbeing - A Social Geographical Perspective. *Landscape and Urban Planning, 65*, 19-30.

Power, A. (2004). *Neighbourhood Management and the Future of Urban Areas*. Houghton Street, London: Centre for Analysis of Social Exclusion London School of Economics.

Rogers, G. O., & Sukolratanametee, S. (2009). Neighborhood Design and Sense of Community: Comparing Suburban Neighborhoods in Houston Texas. *Landscape and Urban Planning*(92), 325-334.

Salleh, A. G. (2008). Neighbourhood Factors in Private Low-Cost Housing in Malaysia. *Habitat International*(32), 485-493.

Salleh, A. G. (2012). Sustainable Urban Neighbourhoods: The Need to Consider Residents' Satisfaction *International Journal of Sustainable Development, 3*(10), 103-108.

Scorbureanu, A. I., & Scorbureanu, I. (2012). Neighborhood Quality Determinants. Empirical Evidence from the American Housing Survey. *Review of Applied Socio- Economic Research, 13*, 153-161.

Serrano, L. D. (2009). Disentangling the Housing Satisfaction Puzzle: Does Homeownership Really Matter? *Journal of Economic Psychology*(30), 645-755.

Tan, T. H. (2012). Housing Satisfaction in Medium- and High-Cost Housing: The case of Greater Kuala Lumpur, Malaysia. *Habitat International, 36*, 108-116.

Theodori, G. L. (2001). Examining the Effects of Community Satisfaction and Attachment on Individual Well-Being. *Rural Sociology, 66*(4), 618-628.

Tu, K. J., & Lin, L. T. (2008). Evaluative Structure of Perceived Residential Environment Quality in High-Density and Mixed-Use Urban Settings: An Exploratory Study on Taipei City. *Landscape and Urban Planning*(87), 157-171.

Westaway, M. S. (2006). A Longitudinal Investigation of Satisfaction with Personal and Environmental Quality Of Life in an Informal South African Housing Settlement, Doornkop, Soweto. *Habitat International*, (30), 175-189.

Yang, M. J., Yang, M. S., Shih, C. H., & See, I. K. (2002). Development and Validation of an Instrument to Measure Perceived Neighbourhood Quality in Taiwan. *Journal of Epidemiology and Community Health*, *56*(7), 492-496.

Zhao, K. (2009). *The Relationships between Perceived Residential Environment Quality and Perceived Restoration in Urban Residents*. Paper presented at the The 1st International Conference on Information Science and Engineering (ICISE2009).