



International Conference on Geographies of Health and Living in Cities: Making Cities Healthy for All, Healthy Cities 2016

## Personal Factors Influencing the Perception of Quality of Life in Hong Kong – A Classification Tree Approach

Chien-Tat Low<sup>a</sup>, Poh-Chin Lai<sup>a,\*</sup>

<sup>a</sup>*Department of Geography, The University of Hong Kong, Pokfulam, Hong Kong*

---

### Abstract

This study explores the interplay between multiple personal factors (i.e. demographic, social, economic, housing, and health) in the perceived quality of life (QOL) in Hong Kong. A classification tree approach was employed to infer the importance of individual attributes in the QOL scores measured on the 5-point Likert scale (1= very dissatisfied to 5= very satisfied; 3= neither dissatisfied nor satisfied). The study included 1163 participants who had completed a postal or an online questionnaire survey between July and August 2015. The majority of respondents (43.5%) expressed satisfied and very satisfied on their perceived QOL, while only 15.5 percent of respondents gave dissatisfied and very dissatisfied ratings. 41 percent of respondents were neutral in their assessment of QOL. None of demographic and social characteristics was important in the prediction of QOL. Monthly household income, tenure of accommodation, housing type and size, and health status were among key factors in determining the QOL. The findings suggested that apart from health status, residents of Hong Kong perceived QOL to highly associate with housing and economic characteristics that reflected their standards of living or personal wealth status. Future studies shall evaluate how personal, social or cultural, and environmental factors contribute towards the perception of QOL.

© 2016 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the organizing committee of Healthy Cities 2016

*Keywords:* Classification and Regression Tree (CART); Quality of Life (QOL); Hong Kong

---

### 1. Introduction

Contemporary studies about quality of life (QOL) are conducted in response to concerns about growing impacts of urbanization on the well-being of its residents. A QOL index is a complex measure that indicates the overall life

---

\* Corresponding author. Tel.: +852-3917-2830; fax: +852-2559-8994.

E-mail address: [pclai@hku.hk](mailto:pclai@hku.hk)

satisfaction of a current state. It includes a wide range of component indicators covering physical, mental, socio-economic, political, cultural, and living or environmental conditions. Some indicators (such as air quality or median household income or number of schools) can be measured or obtained from official sources for objective comparisons. Indicators about the cultural aspect or landscape aesthetics are judgmental and subjective in nature. Recent works have attempted to integrate both objective and subjective approaches in evaluating QOL.

QOL perceived by individuals is highly subjective because of variations in personal background, sentimental attachment to a place, and other influencing factors. Research has shown that Hong Kong residents have a great desire for materialistic attainment which may have a role in their perception of QOL (Sing 2009). With an extremely high cost of living, Hong Kong was ranked one of the least affordable cities to buy a home based on Demographia's (2016) survey over the past 11 years. This study aims to investigate key personal factors from among demographic, social, economic, housing, and health categories that may contribute towards the perception of QOL by employing the method of classification and regression tree (CART) (Breiman et al. 1984).

## 2. Data and Method

### 2.1. Data

The study population included 1163 participants recruited by stratified random sampling conducted by the HKUPOP (The University of Hong Kong Public Opinion Programme) to ensure a representative sample. Participants were asked to complete a postal or online questionnaire survey between July and August 2015. An item that represents the perceived QOL was recorded as an ordinal variable (1= very dissatisfied to 5= very satisfied, 3= neither dissatisfied nor satisfied). A 43.5 percent majority gave satisfactory ratings (satisfied to very satisfied) on the perceived QOL, against to those minority 15.5 percent giving unsatisfactory ratings (dissatisfied to very dissatisfied). 41 percent of respondents expressed impartiality on the perceived QOL. This study employed a total of 19 independent variables reflecting demographic, social, economic, housing and health characteristics of participants, as outlined in Table 1.

Table 1: Independent variables used in this study

Variables				
<u>Demographic</u>	<u>Social</u>	<u>Economic</u>	<u>Housing</u>	<u>Health</u>
1. Age group	3. Marital status	9. Monthly household income	13. Housing type	16. Health status
2. Gender	4. Number of children	10. Expenses for accommodation	14. Housing size	17. Disability
	5. Number of household member	11. Type of occupation	15. Tenure of accommodation	18. Chronic disease
	6. Highest education attainment	12. Nature of occupation		19. Doing exercises
	7. Own a car			
	8. Time spent for voluntary work			

### 2.2. Method of Analysis

CART is an alternative to many traditional statistical techniques such as multiple regression, logistic regression, analysis of variance, for exploring patterns in complicated datasets failed to be uncovered by linear models (De'ah and Fabricius 2001; Frisman et al. 2008). As a non-parametric approach without distributional assumptions, CART can handle datasets containing variables of categorical, scale, and ordinal measurement types. It can also handle missing and unbalanced values in both response and explanatory variables. The method is easy to construct using IBM SPSS version 20.0 and the result is robust and easy to interpret.

The CART module in IBM SPSS will generate a decision tree to illustrate the complex relationships between independent and dependent variables. Based on values of a single independent variable, the procedure recursively splits original cases into significant subgroups or homogenous nodes by maximizing within node-homogeneity. The decision tree will continue to split until a terminal node has reached its purity (i.e. all cases having the same value for the dependent variable). To avoid an overly large tree, variables with an improvement of smaller than 0.01 will

Download English Version:

<https://daneshyari.com/en/article/4401328>

Download Persian Version:

<https://daneshyari.com/article/4401328>

[Daneshyari.com](https://daneshyari.com)