

The Quality of Life of the Bahau Riverside Community: The Case of the Rural Community Living along Muar and Serting Rivers

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Abstract: Quality of Life (QOL) is encompassed in people's satisfaction with regards to various aspects of their existence. Many QOL studies have been pursued worldwide and some of these are focused upon the rural community. This study aims to investigate the QOL of the riverside community living in Bahau which is an area in Negeri Sembilan, Malaysia. This is a quantitative study in which a total of 300 villagers that live near to Muar and serting rivers were chosen as the respondents. The survey method was employed to obtain the data while SPSS was performed to run suitable and relevant analyses. Generally, the analyses confirm that rural communities living near to Muar and Serting rivers in Bahau have a moderate QOL. Specifically, the respondents were found to have a better QOL in terms of their home conditions but not with respect to infrastructure facilities. A number of discussions and recommendations are put forward in this study and it is hoped that these can be used by concerned parties for the development of Bahau.

Key words: Bahau community, quality of life, rivers, rural development, Malaysia

INTRODUCTION

The importance of measuring Quality of Life (QOL) was raised by Ferrans and Power (1985) who stated that such a measurement is necessary to identify people's satisfaction regarding their existence. Previously, human well-being has been calculated based on Gross Domestic Product (GDP) or per capita income (or both). Nevertheless, this type of measurement is unfit for the modern world as the requirement for the measurement is persistently evolving and new methods and tools to measure QOL need to be developed. Measuring QOL is important as it can provide an in-depth understanding regarding the influence of social, environmental and economic aspects on QOL within communities. However, measuring QOL is not an easy task as hundreds of factors can be considered as the main determinants of QOL and there is a vital need to provide a special focus to a study can help concerned parties to trim down the numbers. Studies that focus on the QOL of a rural community, for example will take into account different factors compared to studies on the QOL of an urban community.

According to Farquhar (1995), QOL does not simply refer to the positive things in life but also encompasses negative aspects. Most importantly, the concept of QOL should not be understood as standard of living, due to the fact that the concept of standard of living mainly focuses on income. Abrams (1973) defined the expression quality of life as the degree of satisfaction or dissatisfaction felt by people with various aspects of their lives. According to The WHOQOL Group (1993), QOL can be understood as an individual's perception of their position in life in the context of the culture and value systems in which they live which are relevant to their aims, hopes, standards and anxieties. Apart from this, the best known tools created to measure QOL is that created by the United Nations; that is the Human Development Index (HDI) and that invented by Morris (1979) which is known as the Physical Quality of Life Index (PQLI). HDI was first developed in 1990 and focuses on three basic human needs, namely health, income and education while PQLI focuses on literacy rate, mortality rate and life expectancy.

According to Dasgupta (2000), measuring QOL is essential due to its role in fulfilling at least five functions:

- Obtaining an aggregate index of economic activity
- Comparing well-being in terms of locations, times and groups of people
- Comparing welfare over time among people in the same location
- Measuring the economic standard of living
- Assessing changes that are included in standard of living

A study done by Rahman *et al.* (2011) concluded that in order to calculate QOL, the QOL index should meet three basic needs. First, it should include various dimensions of well-being; second, it should be able to derive feedback impact among components relating to QOL and third, it should not be based on arbitrary assignments of weights to the various components contributing to the value of QOL. A number of studies focus on measuring QOL as depicted in Table 1 which also shows the aspects that have been investigated. Generally, the studies are concerned with social, economic and health-related aspects that should be emphasized to strengthen QOL.

In Malaysia, the importance of QOL has been acknowledged by the government. A substantial amount of funds has been invested to run a series of QOL studies which are conducted by international and local agencies; all of these have one primary purpose which is to identify the level of Malaysian QOL and understand satisfaction towards it. The Malaysian government has implemented its own initiative to measure Malaysian communities' QOL. Those who have a better QOL, according to the Economic Planning Unit of Malaysia (EPU) are those who have a healthy lifestyle and the freedom to gain knowledge and reach a standard of living that exceeds individuals' basic and psychological requirements. The Malaysian Quality of Life Index was first developed in 1999, wherein a total of ten factors were studied (Table 1). The second MQLI was developed in 2002 and the third in 2004; one additional factor was included in the second version, namely culture and leisure. The main reference for

selecting the factors used within the MQLI was studies conducted by established organizations such as the World Bank, the United Nations and IMD International. Efforts to uplift Malaysian communities' QOL have been ongoing and the establishment of the Government Transformation Plan (GTP), National Key Results Area (NKRA) and Economic Transformation Programme (ETP) are expected to speed up the improvement process.

This study is also important in that riverside communities have been paid little attention as the target population of development programs in Malaysia. At the same time, it is quite intriguing to understand how the communities associate themselves with the rivers which were once a powerful feature that influenced their everyday lives. As a first step, assessing their basic QOL status can serve as a useful benchmark from which to understand the socio-economic and development aspects of this type of rural community in Malaysia.

Aspects of quality of life: All of the aspects mentioned in the extant studies are important and have their own reasons for being studied. In the case of this study, however seven aspects have been selected, namely:

- Home conditions
- Social involvement and relationships
- Financial and job security
- Safety
- Education
- Physical environment
- Infrastructure facilities

Some of these aspects are in line with the studies in Table 1. There are a number of reasons why the seven aspects outlined above have been selected. First, all of the aspects are relevant to the National Key Result Area (NKRA) established by the government which are:

- Reducing crime
- Combating corruption
- Expanding access to quality and affordable education

Table 1: Aspects of quality of life considered in previous studies

Name of the researcher/organization	Aspects of QOL emphasized
Rahman <i>et al.</i> (2011)	Relationship with family and friends, health, work and productivity, material well-being, feeling part of one's local community, personal safety and the quality of the environment
Shiovitz-Ezra <i>et al.</i> (2009)	Happiness, self-esteem, depression, loneliness, anxiety, stress and self-reported emotional health
Idler <i>et al.</i> (2009)	Religion
Malaysian Quality of Life Index (MQLI) in 2004	Income and distribution, working life, transport and communication, education, housing, environment, family life, social participation, public safety and culture and leisure
Koch (2000)	Health planning, health economics and medical decision-making
Malaysian Quality of Life Index (MQLI) in 1999	Income and distribution, working life, transport and communication, health, education, housing, environment, family life, social participation and public safety
Farquhar (1995)	Family relationships, social contacts, general health and functional status

- Improving the living standards of low-income households
- Strengthening the infrastructures in rural and remote areas
- Improving urban public transport

The NKRA were introduced to meet the urgent needs of the community and to enhance their QOL. In this study, it is believed that all of the aspects studied have the ability to cover all of the NKRA. The reasons why each of the seven aspects should be included are explained.

Home conditions: Housing is a fundamental need of life and should be included as one of the main constructs of QOL. A good shelter will aid people in fulfilling their basic needs and allow them to participate actively within the community. Furthermore, a house, without doubt, represents the owner's status and culture. Unlike components on housing in other QOL studies that mainly focus on the affordability of housing which is relevant to urban settings, this study will focus on another unique concern as most of the houses and land in rural areas are inherited from parents or grandparents. Therefore, questions of housing affordability, accessibility and crowding for example are seen as not relevant to the present study. A total of eleven questions on home conditions have been included in the survey; these focus on home spaces, location, electricity and water supplies, drainage, roads, numbers of rooms and others.

Social involvement and relationships: Maintaining good and healthy relationships with family and friends is an important element of social life and should therefore be considered as one of the important factors for QOL. Community and family are two components that are essential in constructing a positive QOL. Informal networks and connections between people are important to strengthen communities and gain more social support. Based on this judgment, a total of nine questions have been included; these focus on involvement in community programs related to politics and sports associations, environmental awareness and charity, family activities, relationships and marriage, relationships with neighbors and satisfaction with recreational activities.

Financial and job security: The majority of extant studies related to QOL have included the financial aspect as one of their main determinants and this study follows suit in this regard. A number of studies have proven that stability with respect to income will influence QOL due to the fact that more money will drive people towards a better education, wider employment opportunities, better health services and wider social connectedness. In fact, the financial aspect was also included in the two

best-known QOL measurement tools HDI and PQLI. Financial status can be measured in various ways including being based on income and cost of living. Comparatively, the situation regarding job security between urban and rural communities differs: Workers in urban areas enjoy more secure jobs compared to those in rural areas, due to the fact that most people in rural areas are self-employed or unemployed. Therefore, the present study also incorporates job security aspects into the questionnaire. A total of seven questions are included here; these relate to relationships with office colleagues, work environment, satisfaction with job status, job security/stability, financial status, ability to pay for medical services by private health experts and access to loans.

Safety: Feeling secure and safe in the homes and communities should be a basic right and is certainly a major contributor towards the overall health of a community. Safety is as important as other aspects measured for QOL. In a community in which fewer crimes are recorded, people can have a better QOL compared to those who live in high-crime areas. For this aspect, a total of seven questions were included; these focus on local security, local calmness, enforcement of local laws and preparations for disasters such as floods. In addition, the establishment of local security teams such as RELA and SRS (Skim Rondaan Sukarela) can improve security within a community, therefore questions were asked relating to security services in the local area.

Education: Higher educational achievement is important and should be included in QOL studies. People with higher educational achievements will have wider employment options and thus chances to generate bigger incomes. Compared to their counterparts in the urban areas which are knowledge-based, rural people are always related to the problems of lower education achievement. Besides this, the government has provided extensive support for rural communities in terms of financial, infrastructure and social support to further augment educational aspects in rural areas, therefore there is a need for this study to understand the extent to which this aspect contributes to rural community QOL. There are a total of five questions in this component, focusing on school infrastructure, opportunities to pursue education, level of discipline, opportunities to attend courses/seminars and teaching ability of educators.

Physical environment: The quality of the natural environment can affect QOL. Rapid development has put pressure on the environment and may alter its sustainability. Problems relating to environmental pollution, waste generation and management, heritage

protection and the preservation of indigenous wildlife in built-up areas should be taken into consideration as rural areas continue to decline. Failure to do so will create negative impacts on the health status of the community and lower their QOL. To measure the impact of this aspect on QOL, this study included seven questions focusing on noise, cleanliness, odor, drinking water, rivers and forests/mountains/recreational places

Infrastructure facilities: The availability of infrastructure facilities has an influence on the way people feel about where they live and strengthens the sustainability of the natural environment. Poor access to infrastructure facilities will affect the community's health, financial wellbeing, sense of safety and general community wellbeing. To calculate the level of QOL in terms of infrastructure facilities, a total of five questions have been included; these focus on the availability of places of worship, post offices/banks/police stations, public transportation services, recreational places and public toilet facilities.

Bahau: The Pahang and Muar rivers are nearly connected to each other in Penarikan, Jambu Lapan, located in Bahau, Negeri Sembilan. The two places are only separated by 300 m. Previously Bahau, specifically at Jambu Lapan was one of the trading centers for locals. Traders, especially from Malacca and Muar can be connected to places on the East coast such as Terengganu and Kelantan. Currently, Bahau is more well developed compared to in the past and a number of Federal Land Development Authority (FELDA) projects have been established in the area. Bahau is mainly populated by Chinese (the majority of whom reside in the town), Malay (the majority of which live in FELDA settlement) and Indians. Among the main money-making activities in Bahau are palm oil and rubber production. These two commodities have been proven to uplift and develop the socio-economic status of the local community. A number of Felda projects concentrating mainly on palm oil, such as Felda Lui Timur, Felda Lui Barat and Lui Selatan 1 have been established in Bahau. Moreover, interest from large companies such as IOI, Sime Darby and KLK in investing in these two commodities have increased the speed of development in Bahau. Invariably, the Bahau riverside community may participate directly or indirectly in the various FELDA schemes and in the plantation companies as settler participants or as paid workers.

MATERIALS AND METHODS

This study employs a quantitative approach in which the respondents were chosen based on simple random

Table 2: Quality of life aspects studied

Quality of life aspect	No. of questions
Home conditions	11
Physical environment	7
Safety	7
Social involvement and relationships	9
Education	5
Financial and job security	7
Infrastructure facilities	5

sampling. A total of 300 respondents from 20 villages in Bahau were chosen to be surveyed. Seven aspects of QOL have been emphasized, namely home conditions, social involvement and relationships, education, safety, financial and job security, physical environment and infrastructure facilities as described above. A total of 51 questions were constructed from these seven components. For each question, the respondents were given options on a five Likert-type scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Table 2 displays the number of questions asked in each of the QOL aspect studied. To obtain the data needed, relevant descriptive and inferential analyses were performed.

RESULTS

As shown in Table 3, there is quite a balanced distribution in terms of gender among the selected respondents; 50.7% of the selected respondents are male while the remaining 49.3% are female. The majority of the respondents are aged between 41 and 60 years (43.0%). In terms of education received, a total of 104 respondents possessed a primary school level of education, 45 respondents possessed PMR/SRP/LCE, 97 respondents possessed SPM/SPMV/MCE, 4 respondents possessed skills certificates, 15 respondents possessed an STPM/Diploma and 7 respondents possessed an undergraduate degree/master's/PhD. The majority of the respondents (26.3%) were found to earn an income in the range of RM 501-1000. A total of 180 respondents live in areas located <5 miles from the nearest town and a total of 90 respondents lived within 0.5-1 m of the nearest river. A total of 39.7% of the respondents had lived in the village for >50 years and 124 respondents had between three and five family members in their homes.

Table 4 provides the overall mean score for QOL of the river community in Bahau. This was obtained based on a cumulative value calculated from the seven QOL aspects studied. Based on the overall mean score recorded ($M = 3.59$), it can be seen that the river community in Bahau have a moderate QOL. Further analysis reveals that only 0.3% of the respondents have a low QOL, 54.3% have a moderate QOL and 45.4% have a high QOL.

Table 3: Demographic data of the respondents

Levels	Frequency	Percentage	Mean	SD
Gender				
Male	152	50.7		
Female	148	49.3		
Age (years)				
<40	46	15.3	56.9	14.82
41-60	129	43.0		
>61	125	41.7		
Level of education				
Never been to school	25	9.3		
Primary school	104	34.8		
PMR/SRP/LCE	45	15.0		
SPM/SPMV/MCE	97	32.3		
Skills certificates	4	1.3		
STPM/Diploma	15	5.0		
Degree/master's/PhD	7	2.3		
Income per month (RM)				
≤500	56	18.7	2199.67	8725.28
501-1000	79	26.3		
1001-1500	55	18.3		
1501-2500	56	18.7		
>2501	54	18.0		
Period living in village (years)				
<25	76	25.3	43.0	21.98
26-50	105	35.0		
>51	119	39.7		
Distance to nearest city (km)				
≤5	180	60.0	5.92	4.42
6-10	78	26.0		
>11	42	14.0		
Distance to nearest river (m)				
<250	77	25.7	0.85	0.62
251-500	75	25.0		
501-1000	90	30.0		
1000-2000	58	19.3		
No. of family members				
1-2	104	34.7	3.98	2.22
3-5	124	41.3		
6-7	53	17.7		
>8	19	6.3		

Table 4: Overall quality of life in Bahau

Levels	Frequency	Percentage	Mean	SD
Low (1.00-2.33)	1	0.3		
Moderate (2.34-3.67)	163	54.3		
High (3.68-5.0)	136	45.4		
Total			3.59	0.443

Table 5 depicts specific information on each of the QOL aspects studied. Out of the seven aspects, three yielded a high mean score, namely; home conditions (M = 4.02), social involvement and relationships (M = 3.93) and education (3.72). The remaining four aspects, namely; safety (M = 3.62), financial and job security (M = 3.49), physical environment (M = 3.36) and infrastructure facilities (M = 2.99), recorded a moderate level. The item home conditions had the highest mean score (M = 4.02) while infrastructure facilities recorded the lowest mean score (M = 2.99). For home conditions, further analysis reveals that a large majority of the respondents have a high QOL in this aspect.

Table 5: Overall level of QOL

Levels	Frequency	Percentage	Mean	SD
Home conditions				
Low (1.0-2.33)	2	0.7	4.02	0.567
Moderate (2.34-3.67)	75	25.0		
High (3.68-5.00)	223	74.3		
Social involvement and relationships				
Low (1.0-2.33)	1	0.3	3.93	0.553
Moderate (2.34-3.67)	106	35.3		
High (3.68-5.0)	193	64.4		
Education				
Low (1.0-2.33)	1	0.3	3.72	0.659
Moderate (2.34-3.67)	149	49.7		
High (3.68-5.0)	150	50.0		
Safety				
Low (1.0-2.33)	9	3.0	3.62	0.681
Moderate (2.34-3.67)	155	51.7		
High (3.68-5.0)	136	45.3		
Financial and job security				
Low (1.0-2.33)	47	15.7	3.49	1.097
Moderate (2.34-3.67)	95	31.7		
High (3.68-5.0)	158	52.6		
Physical environment				
Low (1.0-2.33)	1	0.3	3.36	0.450
Moderate (2.34-3.67)	239	79.7		
High (3.68-5.00)	60	20.0		
Infrastructure facilities				
Low (1.0-2.33)	58	19.3	2.99	0.743
Moderate (2.34-3.67)	191	63.7		
High (3.68-5.0)	51	17.0		

DISCUSSION

The majority of the community in Bahau have a high QOL in terms of home conditions, social relationships and involvement and education. Most of the rural community in Malaysia own their houses and land and typically inherited them from their parents or grandparents. Staying in an area for number of generations will drive people to take a good care of the areas and their assets. The local customary system may be one of the reasons why this aspect scores highly. Bahau is located in Negeri Sembilan, a state that is well known with a customary system known as adat pepatih. Adat Pepatih is characterized by three main things:

- Rumah Gadang (the traditional homes of the Minangkabau. The architecture, construction, internal and external decoration and the functions of the house reflect the culture and values of the Minangkabau)
- Ancestral land
- A clan chief (Shahidah and Adibah, 2009)

Communities under Adat Pepatih are urged to preserve and take good care of the Rumah Gadang and ancestral land and it is no wonder that the respondents in this study have a high QOL in terms of their home conditions. Furthermore, the status on the ownership of the house will also drive people to take good care of it. According to Farquhar (1995), people who are living in their own homes have a better QOL, furthermore family

relationships, social contacts and activities are valued components of high QOL. The good level of social involvement and strong social relationships is a sign that the rural community in Bahau is connected to each other. This study reveals that the rural community in Bahau are actively involved in social activities such as politics and environmental awareness and have positive relationships with their family and neighbors.

Education also recorded a good QOL rating. There are a number of reasons why the Bahau community have a good QOL in this aspect. First, the establishment of higher education institutes has widened the opportunities for the rural community to pursue their education at a higher level; a number of higher education institutes such as Universiti Teknologi Mara and College Community have been established around Bahau. Furthermore, the government efforts to enhance the quality of teachers has had an impact on Bahau and a number of high-impact programs such as KPLI (Teaching courses for university graduates) may have uplifted the quality of educators, making them more effective and efficient in delivering knowledge to the students. It is a good sign that the community in Bahau possess a good QOL in terms of education, as past studies such as that conducted by Ross and Van Willigen (1997) claim that education can create a better QOL because it provides the means channel to non-alienated paid work and economic resources that enhance the sense of control over life.

Home conditions was detected to have the highest mean score. This aspect of QOL should be capitalized by the villagers in terms of developing their socio-economic aspects. It is possible that improving home conditions, especially traditional ones, will increase opportunities for villagers with respect to the homestay business which is a growing field in Negeri Sembilan and Bahau can be one of the main centers.

CONCLUSION

Based on the analysis, it can be concluded that the Bahau community possess a moderate level in all aspects of QOL studied. The analysis concluded that three aspects of QOL, namely home conditions, social involvement and relationships and education, recorded a high mean score, while the four other aspects, namely safety, financial and job security, physical environment and infrastructure facilities, recorded a moderate mean score. Overall, it can be concluded that all of the aspects studied are suitable to be used by other QOL studies on rural areas. Malaysia has its own QOL measurement index; nonetheless, it is only suitable at the national level and this study has provided a germane measurement to be used at the rural areas. Questions included in relation to home conditions, for example are suitable for application to rural areas as well; unlike the questions included in a

Table 6: Questions included on home conditions

No.	Questions
1	Electric supply to your home
2	Location of your home
3	Toilet facilities in your home
4	Comfort in your home
5	Space in your home
6	Water supply to your home
7	Your home surroundings
8	Rooms in your home
9	Availability of roads to your home
10	Your home drainage and sewerage system
11	Garbage collection services from your home

general QOL study which typically relate housing affordability, accessibility and crowding, in this study, the questions were more specific and could be applied to rural areas as well (Table 6). Several important QOL aspects were not covered by this study and aspects such as culture and leisure can be included in future studies as the rural community enjoy rich culture and leisure activities, especially those related to traditional culture. In addition, aspects of communication can be included as one of the determinants of QOL for the rural community.

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