

Factors Affecting the Quality of Life among The Rural Community Living Along Pahang River and Muar River in Malaysia

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Abstract: The role of rivers in Malaysia in uplifting the socio-economic status of the rural community cannot be denied. With the ability to uplift the socio-economic status of the rural community, it is also expected that their quality of life can also be enhanced. This study intends to reveal the level of quality of life of the rural community living along two major rivers in Malaysia, Pahang River and Muar River and to investigate the factors affecting their quality of life. This is a quantitative study, where data were gained from 900 respondents from three main cities along Pahang River and Muar River namely Pekan, Bahau and Muar. Results gained have proved that the respondents studied have a moderate level of quality of life. However, further analysis have specifically proven that respondents studied have a high level of quality of life in the aspect of social involvement and relationship, home condition, safety at the areas and education. Analyses done have confirmed that there is a significant difference between quality of life and all of the independent variables studied. Using Pearson product-moment, this study managed to identify significant relationships that occur between quality of life and four independent variables studied.

Key words: Rural community, Rural Development, Quality of Life, Socio-demography factors,

INTRODUCTION

A river is a natural waterway on the Earth's surface, which channels freshwater from the mountains to the sea. Rivers begin as small trickles of water up in the mountains. This is its source, and it eventually forms a small stream which then flows down the mountain. The water erodes the land, carving a bigger channel and forms the main river. In the recent record, there are 189 river basin systems with about 1800 rivers in Malaysia which cover the total length of 38,000km. Among the famous rivers in Malaysia are the Pahang River (about 470 km), Kelantan River (about 400 km), Perak River (about 240 km), Kinabatangan River (560 km) and Rajang River (560 km). Besides supplying clean water to 8 million Malaysians, the role of the rivers in Malaysia in upgrading the socio-economic status of the rural community especially those who live along the rivers, cannot be denied.

Pahang River and Muar River:

Pahang River and Muar River are among the major rivers in Malaysia. Pahang River flows through two states; Pahang and Negeri Sembilan while Muar River flows through two states; Johor and Negeri Sembilan. Interestingly, these two rivers are only separated by 300 meters at a place called Penarikan in Negeri Sembilan. In the old days, these two rivers have played major roles in flourishing the economic activities of the local community. Trading boats from Muar River could continue their journey until they reach Kuala Pahang in Pekan, or Kuala Lipis to continue into Terengganu, Kelantan or Perak. At Jalan Penarikan, the boats need to be pulled overland. The distance is about 300 meters and because of the pulling of boats overland, the route is named Penarikan, which is the Malay word for pulling. Besides being useful road for trading, a lot of historical stories and places can be found along these two rivers. These two rivers were the route used by

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“Hang Tuah” the famous Malay warrior who brought the beautiful princess named “Tun Teja” to Malacca. Besides, famous historical places such Bukit Kepong Police Station, Bombed bridge called “Jambatan Patah”, “Kota Buruk” and Lubuk Pahang Tomb which locate the tombs of Sultan Abdul Jamil, Datuk Budiman and Puteri Buluh Betong are among the major attractions (Sulaiman *et al.*, 2010).

The local community of Pahang River and Muar River still get connected to the rivers especially for conducting their socio-economic activities. These two rivers still have a lot more to offer to the community living along them and this is not surprising as a number of socio-economic activities such as advance transportation system which include inland waterway, tourism activities such as agro-tourism, recreational activities such as fishing and kayaking and business activities such as shops, hotels, bed and breakfast, sand mining industries, boat making industries and stores selling local products have already been and will continue to be practiced. With the advancement of the socio-economic activities, it is expected to benefit the local community and invariably it will also impinge with their quality of life (Sulaiman *et al.*, 2010).



Fig. 1: Flows of Pahang River and Muar River

Malaysian Rural Community Quality of Life:

Quality of life, happiness, wellbeing, and utility are often seen as one and they are frequently used interchangeably. Quality of life can be defined as an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns (WHOQOL Group, 1993). The rural community in Malaysia are having a better quality of life nowadays compared to the early days after Malaysia gained its independence. This is a result of two transformation stages. The first stage was planned from 1957 to 1994 and the second stage of transformation was planned from 1994 till 2020. The benefits of these transformation stages can be clearly seen in the increase of income levels of the rural community. In 1999, it was noted that the monthly income per month per rural household was RM1,718. However, after 10 years, the income has significantly increased to RM2,545 in 2009.

The rural community has persistently been the focus of the government and in the recent Tenth Malaysia Plan (10MP), a total of RM145 billion will be allocated for the physical, economic and social development of the rural areas. The two transformation stages have brought a great impact on the education aspect when almost half million of the rural students were offered places at the university to pursue their studies at bachelor level. In 2006 to 2009, a total of 1,419.26 km of new and repaired roads have been made available in the rural areas. Health services provided to the rural community have been well developed in Malaysia, and to ensure that the rural community will continue to enjoy a better access to the health services provided by the government, a total of 1927 rural clinics were established at the rural areas.

In 2010, a total of 14,140 houses (which before this were without electric supply) have been provided with this energy supply while for water supply a total of 15,383 new houses in the rural areas have been provided with clean water (Ministry of Rural and Regional Development, 2011). The Malaysian NKRA (National Key Result Areas) has been introduced and of course one of the main targets of such NKRA is to enhance the

rural community quality of life. Six (6) NKRAAs have been introduced and it includes 1) reducing the crime rates; 2) combating corruption; 3) widening access to affordable and quality education areas; 4) raising the living standard of the poor; 5) improving the infrastructure in rural areas and 6) improving public transport in the medium term. Data provided here represent the general data of the QOL of the rural community in Malaysia but not looking specifically into the QOL of the rural community who live along Pahang River and Muar River in which this study will cover.

Factors affecting QOL:

There are a lot of factors that are found to affect the QOL. Among the identified factors are the socio-demographic factors. Income has been highly related to QOL. People with a better income are expected to have a better QOL and this is not surprising as it has been found by a number of studies such as by Chmiel *et al.* (2011); McGregor (2004); McGuire *et al.* (2009); Tang (2007); and Peterson *et al.* (2006). Diener and Diener (1995) have proven in their study that wealth is significantly correlated with higher QOL and stressed that a wealthier nation will provide a better access towards a better QOL for their people.

Period of staying in an area can be one of the influential factors for QOL. Tay *et al.* (2004) for example have studied this factor and have come out with a conclusion that community who stayed in an area for a longer period will have a lower QOL. The size of the family does have an influence on QOL. Li *et al.* (2001) and Wilson *et al.* (1997) have stated that the number of family members do have an influence on QOL. However, Tay *et al.* (2004) have opposed this view when stating that this factor is not giving any impact to the QOL.

Previous studies by Chen (2011); Reklaitiene *et al.* (2009) and Liu *et al.* (2001) also have proven that education has the key for people to have an access to a better QOL. However not all previous studies have successfully proven that education has the key for a better QOL; Mammen *et al.* (2009) have revealed that there was insignificant relationship between level of education and QOL. Job category can determine the level of QOL of a person. Martin (2011) in his research has concluded that although “money” was the most commonly aspect linked to a better QOL, it cannot be denied that “job or work” is also the important determinant for a better QOL.

Age is always related with QOL (Unruh *et al.*, 2008; Bowling *et al.*, 2007; Quintana *et al.*, 2005 and Breeze *et al.*, 2004). One conclusion that can be made from all of these studies is that older people have a low QOL especially when it comes to their health compared to the younger people. However, Hensing *et al.* (2003) and Bowling *et al.* (2007) have come out with contradictory results when they concluded there is no difference in QOL between the group ages while Caron (2011) has proven that younger people (especially in a nation with higher food insecurity) will suffer a lower QOL. There is always question issued on who have a better QOL, men or women? Sabbah *et al.* (2003) and Shucksmith *et al.* (2006) for example have revealed that men recorded a better QOL compared to women. Based on the facts and data presented, there are a number of factors that can be related to QOL, the main question now; are the same factors influencing the QOL of the rural community that are living along Pahang River and Muar River in Malaysia? This study intends to investigate it.

Methodology:

This is a quantitative study where a questionnaire was used to gain the data needed. The questionnaire was first pre tested at two selected villages in Muar. A total of 30 respondents were involved in the pre-test and resulted in the cronbach alpha value of .885 thus exceeding the recommended alpha value of Nunnally (1978) and Mohd Majid (1998). For the actual data collection, a total of 900 respondents were selected from a simple random sampling process. The number was gained from three cities along the Pahang and Muar River namely Pekan (end of Pahang River), Bahau (city where Pahang River and Muar River are nearly connected) and Muar (end of Muar River). At each city, 300 respondents were selected. A total of seven aspects of QOL have been asked to the respondents which are 1) home condition; 2) physical environment; 3) safety at the areas; 4) social involvement and relationship; 5) education; 6) financial and job security and 7) infrastructure facilities. A total of 51 statements were formulated for all of the seven aspects of QOL. For each of the question, a five likert-like scale was used, ranging from 1) very unsatisfied; 2) unsatisfied; 3) moderately satisfied; 4) satisfied and 5) very satisfied. For analysis, SPSS was employed. To describe the general data of the study, analysis such as frequency, percentage, mean and standard deviation were used. Inferential analyses such as Independent t-test and ANOVA were employed to seek any difference that might occur between the independent and dependent variables while for seeking any relationship that might occur between QOL and selected independent variables, Pearson product-moment correlation was employed. There are ten independent

variables in this study namely gender, age, level of education, job category, income per month, poverty level, period of staying at the village, distance to the nearest city, distance to the nearest river and number of family members. The dependent variable for this study is the QOL of the rural community living along Pahang River and Muar River.

RESULT AND DISCUSSION

Table 1 presents the socio-demography data of the respondents studied. Based on the results gained, it can be clearly seen that majority of the respondents are male (55.3%), aged between 41 to 60 years (49.7%) and possess primary school level of education (32.7%). A total of 26.0% of the respondents are housewives compared to 9.0% of the respondents who worked as the government servant. More than a quarter of the respondents (27.9%) earned between RM501-RM1000 a month while a 16.0% of the respondents earned >RM2501 per month. It is good to know that a large majority of the respondents (71.3%) earned income above the poverty level set by Malaysia government which is more than RM720 per month. More than one third of the respondents (36.4%) have stayed in the village for > 51 years while 36.2% of the respondents stayed < 5 km from the nearest city. Majority of the respondents stayed near to the river and this can be proven through the mean score recorded for their home distance from the Muar River or Pahang River which is 0.86km. More than two fifths of the respondents have 3 to 5 family members in their homes.

Table 1: Socio-demography data of the respondents

Level	Frequency	Percentage	Mean	SD
Gender				
Male	498	55.3		
Female	402	44.7		
Age (years)				
<40	165	18.3	53.5	14.6
41-60	447	49.7		
>61	288	22.0		
Level of education				
Never been to school	72	8.0		
Primary School	294	32.7		
PMR/SRP/LCE	187	20.8		
SPM/SPMV/MCE	270	30.0		
Skills certificates	15	1.7		
STPM/Diploma	43	4.8		
Degree/Master/PhD	19	2.1		
Job category				
Housewife	234	26.0		
Self-employed	182	20.2		
Agriculture related	122	13.6		
Retiree	116	12.9		
Private sector	89	9.9		
Government sector	81	9.0		
Others	76	8.4		
Income per month				
<RM500	176	19.6	1874.74	5375.53
RM501-RM1000	251	27.9		
RM1001-RM1500	155	17.2		
RM1501-RM2500	174	19.3		
>RM2,501	144	16.0		
Poverty Level (PL)				
Below PL (<RM720)	258	28.7		
Above PL (>RM721)	642	71.3		
Period of staying at the village (years)				
<25	250	27.8	40.9	21.6
26-50	322	35.8		
>51	328	36.4		
Distance to the nearest city (km)				
<5 km	326	36.2	10.98	10.39
6-10 km	259	28.8		
>11km	315	35.0		
Distance to nearest river				
<250 meter	230	25.6	0.86	0.65
251-500 meter	237	26.3		
501-1000 meter	233	25.9		
1km-2km	200	22.2		

Table 1: Continue

Number of family members			4.67	2.50
1-2	200	22.2		
3-5	400	44.4		
6-7	187	20.8		
>8	111	12.3		

Table 2 shows the overall level of QOL. The level was gained by calculating the cumulative value of all the seven QOL aspects. The maximum score for the mean score is 5.00. Then, the value was grouped into three levels namely low (1-2.33); moderate (2.34 – 3.67) and high (3.68 – 5.00) respectively. Based on the analysis employed, it can be seen that the overall mean score recorded for the overall QOL was 3.64 which concludes that respondents studied have a moderate level of QOL.

Table 2: Overall level of quality of life

QOL Frequency	Percentage	M	SD
Overall level of QOL			3.64 .413
Low (1-2.33)	2	.2	
Moderate (2.33-3.66)	455	50.6	
High (3.67-5.00)	443	49.2	

As mentioned earlier, there are seven aspects of quality of life studied. The cumulative value of each aspects was gained and it was grouped into three levels namely low (1-2.33); moderate (2.34 – 3.67) and high (3.68 – 5.00) respectively. The highest mean score was recorded by the aspects of social involvement and relationship (M = 3.94) followed by the aspect of home condition (M = 3.91) and the third highest mean score was recorded by the aspect of safety at the areas (M = 3.79). However, analysis performed has confirmed that the aspect of infrastructure facilities has recorded the lowest mean score (M = 3.12) (Table 3).

Table 3: Aspects of quality of life studied

Quality of life aspects	Frequency	Percentage	M	SD
Social involvement and relationship			3.94	.561
Low (1-2.33)	6	.7		
Moderate (2.33-3.66)	303	33.7		
High (3.67-5.00)	591	65.6		
Home condition			3.91	.544
Low (1-2.33)	4	.4		
Moderate (2.33-3.66)	274	30.4		
High (3.67-5.00)	622	69.2		
Safety at the areas			3.79	.653
Low (1-2.33)	15	1.7		
Moderate (2.33-3.66)	332	36.9		
High (3.67-5.00)	553	61.4		
Education			3.73	.583
Low (1-2.33)	3	.3		
Moderate (2.33-3.66)	431	47.9		
High (3.67-5.00)	466	51.8		
Physical environment			3.50	.498
Low (1-2.33)	6	.7		
Moderate (2.33-3.66)	599	66.6		
High (3.67-5.00)	295	32.8		
Financial and job security			3.47	.908
Low (1-2.33)	98	10.9		
Moderate (2.33-3.66)	377	41.9		
High (3.67-5.00)	425	47.2		
Infrastructure facilities			3.12	.719
Low (1-2.33)	127	14.1		
Moderate (2.33-3.66)	579	64.3		
High (3.67-5.00)	194	21.6		

Previous studies done by Sabbah *et al.* (2003) and Shucksmith *et al.* (2006), have proven that males have a better QOL compared to females, but can findings from these studies be applied in the Malaysian setting especially among the rural community living along Pahang River and Muar River? Table 4 has the answer. Based on the (M = 3.69, SD = .392) for males and (M = 3.57, SD = .429; t (900) = 4.607, p = .0001) for females, it can be concluded that there was significant difference in QOL between males and female. It can be proved that male have a better QOL compared to females based on a better mean score on QOL recorded by male respondents. Hence, this study supported studies done by Sabbah *et al.* (2003) and Shucksmith *et al.* (2006).

For determining any difference that might occur in the factor of education, the respondents' level of education has been divided into two categories namely 1) PMR and below and 2) SPM and above. Respondents who are included into the PMR and below group are those who have never been to school, possess primary school level of education and possess SRP/PMR. Those who are included in the group of SPM and above are respondents who have SPM/SPMV, skill certificates, STPM/Diploma and degree/master/PhD. Result gained have proved that PMR and below group recorded ($M = 3.60$, $SD = .426$) and SPM and above ($M = 3.70$, $SD = .385$; $t(900) = 3.845$, $p = .0001$), thus it reveals that there is a significant difference between the two groups studied. The result gained here is not surprising as it is in tandem with studies done by Chen (2011); Reklaitiene *et al.* (2009) and Liu *et al.* (2001). Chen (2011) for example has stressed that individuals who have a better level of education have more extensive social networks as well as greater involvement with the wider world; all of these are positively related with happiness. By widening one's ability and intention to connect with the wider social world, education has a huge potential to improve an individual's quality of life. The current poverty level determined by the government is RM720 and below and this study would like to investigate if there is any difference that might occur between respondents who are in the group of below the poverty level and respondents who are in the above poverty level. Based on the ($M = 3.54$, $SD = .425$) for below poverty level and ($M = 3.68$, $SD = .403$; $t(900) = 4.401$, $p = .0001$) for group of above the poverty level, this study found that there is a significant difference that occurred between the two groups studied. As has been stressed earlier, "money" was the most common aspect linked to a better QOL (Martin, 2011). People who are out from the poverty level group definitely will have a better QOL compared to people who are in the poverty level group, due to a better financial ability that they have.

Table 4: Difference in QOL between selected independent variables using Independent t-test.

Variables	n	Mean	S.D	T	p
Gender				4.607	.0001
Male	498	3.69	.392		
Female	402	3.57	.429		
Level of education				3.845	.0001
PMR and below	552	3.60	.426		
SPM and above	348	3.70	.385		
Poverty level (PL)				4.401	.0001
Below PL	258	3.54	.425		
Above PL	642	3.68	.403		

To further investigate any difference that might occur between selected independent variables, ANOVA was employed. This study was interested to inspect any difference that might occur in QOL for the factor of income per month. Based on the results gained, it can be seen that the highest mean score was recorded by respondents who earn >RM2,501 per month ($M = 3.83$) followed by respondents who earn RM1,001-RM1,501 a month ($M = 3.68$) and respondents who earn RM501-RM1,000 a month ($M = 3.60$). The lowest mean score was recorded by the respondents who earn <RM500 a month ($M = 3.55$). Based on the F value ($F(5, 900) = 11.909$, $p < 0.05$), there was significant difference that occurred between the five groups studied. This is not surprising as it is in tandem with studies done by Chmiel *et al.* (2011); McGuire *et al.* (2009); Tang (2007); and Peterson *et al.* (2006). McGregor (2004) which has added that money can be seen as resources in themselves, allowing e.g. purchasing of material goods and allowing one to engage in work, to gain money and so on and all of this according to him is important for a better QOL. Further analysis using Post Hoc test revealed that there was a significant difference in QOL that occurred between respondents who earned RM2,501 a month and the other four level of income groups.

In term of job category, there were seven groups studied. Based on the ANOVA performed, it can be concluded that with F value ($F(5, 900) = 9.189$, $p < 0.05$), there was significant difference that occur in the factor of job category. There is probability that respondents who work in the government sector do have a better quality of life based on the highest mean score recorded ($M = 3.83$). Further analysis using Post Hoc test has confirmed to us that there is significant difference that occur in QOL between respondents who work in the government sector and respondents who work in private sector, being self-employed, housewives, in agriculture related and others job. However there is no significant difference that was identified between respondents who work in the government sector and respondents who have retired. Result gained here contradicts with what has been found by Martin (2011), who said that type of job will contribute positively to the main aspect of QOL which is the availability of "money". A simple conclusion can be drawn from what Martin (2011) has studied; a better job will contribute toward a better financial status thus contribute towards a better QOL (Table 5).

Table 5: Difference in QOL between selected independent variables using ANOVA

Variables	n	Mean	SD	F	p
Level of income				11.909	.0001
<RM500	176	3.55	0.454		
<RM501-RM1000	251	3.59	0.385		
RM1001-RM1500	155	3.68	0.424		
RM1501-RM2500	174	3.60	0.388		
>RM2501	144	3.83	0.367		
Job category				9.189	.0001
Housewife	234	3.51	.425		
Self-employed	182	3.65	4.10		
Agriculture related	122	3.65	.343		
Retiree	116	3.76	.401		
Private sector	89	3.63	.342		
Government sector	81	3.83	.414		
Others	76	3.60	.454		

To reveal any relationship that might occur between QOL and selected independent variables, Pearson product-moment correlation was employed. For this purpose, five selected independent variables namely distance to the nearest river, period of staying in the village, distance to the nearest city, age and numbers of family members were selected. Based on the analysis performed, it can be seen that four out of five selected independent variables were found to have a significant relationship with QOL. Factor of distance to the nearest city ($r = .669$), period of staying in the village ($r = .646$) and number of family members ($r = .543$) were found to have a significant and moderate relationship with QOL while age ($r = .230$) was found to have a significant and low relationship with QOL. Distance to the nearest city will have an influence on the quality of life; community living near to the city will have a better access to the service, chances and opportunity to upgrade their socio-economic status. The finding of this study has agreed with what have been found by Tay *et al.* (2004) whereby period of staying in the village has been found to have a significant relationship with QOL. Furthermore, Tay *et al.* (2004) have revealed that bigger family size will contribute to a lower QOL, probably due to a bigger expenditure needed for the family. Age is the aspect that is highly related to QOL. Usually older people are always related to a lower QOL especially regarding their health and this is not surprising as it has been discussed widely by a number of previous studies (Unruh *et al.*, 2008; Bowling *et al.*, 2007; Quintana *et al.*, 2005 and Breeze *et al.*, 2004). However, the factor of the distance to the nearest river was found not to have any significant relationship with QOL. Furthermore, three factors namely distance to the nearest city, period of staying in the village and number of family members were detected to have a negative and significant relationship with QOL, hence we can conclude that farther from the nearest city, the longer they stay at the area and the bigger their family members, the lower QOL they will have (Table 6).

Table 6: Relationship between QOL and selected independent variables

Variables	r	P
Distance to nearest river	.080	.017
Period of staying in the village	-.015	.646
Distance to the nearest city	-.014	.669
Age	.040	.230
Number of family members	-.020	.543

Conclusion:

Based on the results gained, it can be seen that the rural community living along Pahang River and Muar River have a moderate QOL. Further analysis have proven specifically that Pahang River and Muar River community do have a higher QOL in the aspect of social involvement and relationship, home condition, safety at the areas and education. This study also has revealed that the Pahang River and Muar River community do have a moderate level of QOL in the aspect of physical environment, financial and job security and infrastructure facilities. ANOVA and independent t-test employed have proven that all of the independent variables namely income, job category, gender, education and poverty level do have a significant difference with QOL while Pearson correlation employed has proven that four out of five factors namely distance to the nearest city, period of staying in the village, number of family members and age have a significant relationship with QOL. However, factor of distance to the nearest river was detected to have no significant relationship with QOL.

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