

# Factors Influencing the Quality of Life of Malaysian Fishermen

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*Abstract:* - The quality of life for fishermen is a significant issue in Malaysia and abroad. The Malaysian government has introduced many programs to improve the living standard of fishermen. However, their level of poverty remains high and the quality of life low. Therefore, this study investigates the factors influencing the quality of life of Malaysian fishermen. It uses a cross-sectional and mixed methodology design based on quantitative and qualitative data from primary and secondary sources. Direct observation, interview and focus group discussions (FGD) through clustered purposive sampling was used to collect the primary data. There 510 respondents participated in this study across the five states of Terengganu, Selangor, Perak, Kedah, Johor and Sabah. This study found that income, expenses, saving, ownership, housing, and religion significantly influenced the quality of life of fishermen, while government policies were insignificant. Hence, a new quality of life indicator is developed to suit the needs of the fishermen community.

*Key-Words:* - Actual needs, quality of life, quality of life indicators, Malaysian fishermen

## 1 Introduction

Quality of life is an important issue facing the Malaysian government which is tasked with improving the standard of living of local

communities especially fishermen. The government adopts various techniques to measure the quality of life of fishermen [1]. Among such tools is the Quality of Life Index (QOL), which consists of nine

major factors including the material wealth, health, political stability and security, family life, community life, climate and geography, work safety, political freedom and gender equality [2]. Besides that, Malaysia also uses the Gross National Happiness Index of Bhutan to measure the stages of the population as a whole about their quality of life. The index also uses nine main domains as benchmarks for a country's measurement such as psychological well-being, time spent, social life, culture, health, education, environmental diversity, living standards and governance [3].

There are the number of components or indicators for measuring the quality of life constantly increases [4]. This is because of the ever-changing social and environmental changes based on the needs of the nation and society. In pursuit of current technology flows and socio-economic changes in 2013, Malaysian Quality of Life Index has been re-moulded into a more well-defined concept of living wellness and takes into account

many aspects of living well-being [5]. Further, [6] added the religious and spiritual elements in the quality of life measurement. They used the five main elements of the Maqasid al-Shariah, namely maintaining common sense, safeguarding religion, safeguarding property, safeguarding life and safeguarding lineage.

For Malaysia, the fishery sector contributes significantly to the economy. [7] revealed that Malaysia is located strategically along international trade routes such as the Straits of Malacca and the South China Sea. Sadly, Malaysia should lead the country to run a maritime-based industry. The fishery sector only contributed as much as 10.7% of Gross Domestic Product (GDP) which is categorised as small. Based on the data obtained from the Department of Fisheries Malaysia in 2015, it shows that the number of fishermen working on licensed fishing vessels was 102,337. Sabah has the highest number of fishermen with 23,428, followed by Sarawak with 13,376.

Table 1 Local fishermen working on licensed fishing vessels throughout Malaysia

State	Local Fishermen				
	Bumiputera	Chinese	Indian	Others	Total
Perlis	1,676	9	-	-	1,685
Kedah	9,520	489	3	-	10,012
Penang	3,203	2,175	32	-	5,410
Perak	3,928	8,049	274	-	12,251
Selangor	1,927	4,243	236	84	6,490
Negeri Sembilan	244	22	37	1	502
Malacca	945	162	2	91	1,200
Sabah	23,084	344	-	-	23,428
Sarawak	8,208	772	-	4,396	13,376
Labuan	798	91	-	8	897
Pahang	4,674	639	-	22	5,335
Terengganu	7,748	9	-	-	7,757
Kelantan	4,142	-	-	-	4,142
Johor	7,195	2,170	5	482	9,852
Total	77,292	19,372	589	5,084	102,337

The role of the government is to assist fishermen, farmers and breeders to be competitive with other sectors, thus helping to increase household income. The People's Welfare Development Scheme (SPKR) and several other programs are specially designed to diversify their income sources. Although the fisheries sector has undergone significant technological changes, the economic status of most of the fishing communities is still low [8].

The government is committed to ensuring the best quality of life in urban and rural areas in line

with Malaysia's aspiration to become a developed nation by 2020. Apart from the government's support for efforts to increase the income of fishermen, the impact of development around residential areas has also affected the change in the well-being of the fishermen. Development of tourism and industrial sectors also helps fishermen to enhance their quality of life. Infrastructure improvements from surrounding development have also increased the availability and improvement of the fishermen's daily life. Furthermore, facilities

implemented by the government have had a positive impact on their life [9].

Through the Ministry of Agriculture and Agro-based Industry, the government has appointed the Department of Fisheries Malaysia to focus on the fishery industry in Malaysia. Among the major missions of the Fisheries Department is the development of the fishery industry, managing the nation's fisheries resources and boosting the delivery system. Apart from the Department of Fisheries, the government has also established an organisation that manages the affairs of fishermen namely the Malaysian Fisheries Development Authority. The establishment of such an organisation has made the fishing industry and fishing community part of the country's development plan. The government strives to safeguard the welfare of all people regardless of their rank and status.

As mentioned, the quality of a fisherman's changes should be seen from various viewpoints namely physical, mental and spiritual. Consequently, this study investigates the factors influencing the quality of life of fishermen in peninsular Malaysia and establish new indicators for measuring the fishermen's quality of life.

## 2 Literature Review

The quality of life is the individual's perception of the position of life in the cultural context and value of the system in which they live. It also determines the relationship between goals, expectations and anxiety [10]. It is a broad concept involving individual health, psychological state, level of liberty, social relations, trust and relationships between individuals and the environment. Quality of life does not only involve material but includes all things that can affect the level of human satisfaction [11]. The better the level of community satisfaction, the more comfortable and effective the quality of their lives [12].

Numerous researchers have studied the quality of life. [13] examined the quality of life of the people in Redang and Perhentian Islands, Terengganu analysing how socio-economic and socio-cultural factors affect the quality of life of the island's population. Overall, the quality of life for both island residents regarding occupation, health and education, is still moderate. However, from the perspective of housing quality, it is still low. This affects the quality of life of the island population.

Further, [14] analysed the determinants of the well-being of coastal fishermen in Kuala

Terengganu; [15] studied social, and urbanisation quality in Malaysia; [16] identified the importance of education in the development of a quality of life where education has a huge impact on opportunities to acquire and sustain the quality of life. Education can explain the capabilities of an individual in managing quality of life due to economic and social factors depending on the education received. Quality education is very effective in fighting poverty, building democracy and forming a prosperous society. Through education, individuals are able to build their self-esteem to deal with their world, enjoying their existing facilities and understanding themselves. Education acts as a catalyst for well-being by leading individuals towards steady economic sources.

In addition, [17] studied the religious dimension to the quality of life indicators and concluded that it was crucial in the growth and improvement of the quality of life of a society. Religion plays an important role as it affects mental health, transforming individual attitudes towards a more positive life and ultimately transforming the lifestyle and the economy of the individual over a long period. The focus of this study looks at existing religious values and religious programs applied in zakat institutions and their propensity to change the economic status of recipients and improve their satisfaction. Recipients such as the underprivileged and the poor are the focus of this study, and the findings show that religious factors generally do not significantly affect the quality of life satisfaction. However, studies show that religious and educational factors influence the income level of the underprivileged but not significantly by the poor. As a result, religious and educational factors can be used to increase the quality of life and income of the underprivileged but not the poor.

[18] stated that physical comfort is one of the important factors in influencing well-being and quality of life. Emotional factors are also taken into account in evaluating the quality of life. Emotional stress such as discomfort and misery will affect the overall quality of life. Apart from financial stability and income, the level of comfort can also be used to measure the quality of life.

## 3 Methodology

This study employs a mixed methodology comprising quantitative and qualitative methods and using primary and secondary data. Secondary data were obtained from various government agencies, particularly LKIM which has implemented a poor

community development programme for fishing communities. The primary data were obtained through direct observation of the sampled population. Two interview methods were used to gather information which includes face-to-face interviews with focus groups (FGDs) and structured interviews by distributing survey questionnaires. The FGD was held with selected respondents as informants to support the quantitative data. The design of this study is cross-sectional and uses clustered purposive sampling. A total of 510 respondents were involved in the collection of research data.

The questionnaire was distributed in accordance with the established sampling framework involving 5 Zones consisting of North, South, East and West Zones of Peninsular Malaysia and one (1) zone in East Malaysia. Each zone is represented by 50 respondents. Thus, the minimum number of respondents in this study is 250 people. 50 people were involved in the FGD interviews by taking ten informants from each zone. The qualitative findings obtained through the FGD method were transcribed and analysed using NVIVO 8 software.

Furthermore, this study performed descriptive statistical analysis and statistical inference analysis. The descriptive statistical analysis involves the measurement of central tendency such as frequency, mean and standard deviation. To measure the level of each indicator, this study modifies the measurements proposed by [19] who divides the level into three categories, namely low, medium and high. In detail, through the size of the central tendency (mean), 1.00 to 4.66 is considered low; the mean value of 4.67 to 7.33 is considered moderate and mean value of 7.34 to 10.00 is considered to be high.

#### 4 Result and Discussion

As mentioned in the previous section, the data were analysed using a mixed methodology through face-to-face interviews and focus group discussions (FGD). Face-to-face interviews and FGDs show that the measuring indicators used to measure fishermen in Malaysia's quality of life are different than the quality of life indices used by the local government. Good and comfortable housing areas, as well as consistent income and the ability to sustain their lives, is indispensable. Apart from housing, past studies also show that earning is the main theme discussed by researchers. Housing [12] is a major factor in the quality of life of fishermen in Redang

and Perhentian Islands. [18] showed that physical comfort is one of the important factors in influencing the well-being and quality of life of fishermen. Based on the interviews with informants, the majority stated that "...need a comfortable house since we have many children...PPRT house is too small for most of us..." and "...this housing issue has been widely discussed on at the Regional Fishermen's Association's meetings...".

Past studies also showed that the education indicator is among the determinants of improving the fishermen's quality of life. [14] analysed the determinants of the well-being of coastal fishermen in Kuala Terengganu. [16] in his study, he considered the importance of education in the development of a prosperous quality of life where education has a huge impact on opportunities to acquire and sustain a quality life. Most respondents admit that education is very important in improving fishermen's quality of life. They do not want their children to become fishermen like them. Through interviews with informants, the majority that "...making education a priority for my children. I save money for my children's education expenses..."

Having that, people's quality of life in Malaysia is measured using the Malaysian Quality of Life Index (IKHM). It comprises 11 components, namely education, transportation and communication, housing, culture and leisure, income and distribution, public safety, health, social participation, environment, family life and working environment. Next, to form the indicators of quality of life of the fishermen community based on the actual needs of fishermen, this study uses primary and secondary data.

Primary data were analysed qualitatively and quantitatively. By using primary data through qualitative analysis with face-to-face interviews and focus group discussion, the researchers found that seven indicators of quality of life that are appropriate to the actual needs of the fishing community, namely religion, government policies, housing, earning/income, expenses, ownership and savings. Additionally, by using secondary data through literary readings such as books and journals, the researchers found that the Malaysian Quality of Life Index (IKHM) used by the Malaysian government to measure the quality of life of the people was inappropriate. This is because the measurements did not represent the needs of the fishing communities in improving their quality of life.

Table 2 Malaysian quality of life index indicator and proposed fishermen communities' new quality of life index indicators

No	IKHM Indicators	Proposed Indicators
1	Education	Religion
2	Transportation and Communication	Government Policies
3	Housing	Housing
4	Culture and Leisure	Revenue
5	Earning/Income and Distribution	Expenses
6	Public Safety	Ownership
7	Health	Savings
8	Social Participation	
9	Environment	
10	Family Life	
11	Work Environment	

In addition, to determine the capability of life quality indicators proposed by researchers, the Pearson Correlation test has been used to study the relationship between the indicators and the quality of life. Referring to Table 3, this study found that six indicators have significant relationships with the quality of life - income, expenses, savings, ownership, housing and religion. Whereas, government policy indicators were found to have no significant relationship with the quality of life. Furthermore, based on data analysis, the researchers

found that the correlation coefficient of housing indicator was 0.715 or 71.5%. This means that housing indicators are closely related to the quality of life where the fishermen need comfortable homes. Furthermore, through interviews with ten informants, the majority stated: “...*fishermen need comfortable housing areas from the government*”.

Table 3 Test of the correlation among variables

Indicator	Quality of Life (QoL)
Income/Earning	0.597**
Expenses	0.656**
Saving	0.269**
Ownership	0.591**
Housing	0.715**
Religion	0.263**
Government Policies	0.072

\*\* . Significant at 0.01 (1%)

\* . Significant at 0.05 (5%)

Table 3 shows the testing of the recommended quality of life indicators. Based on the seven proposed indicators through qualitative analysis and past readings, researchers have suggested seven indicators, namely income, expenses, savings, ownership, housing, religion and government policies. From the seven indicators, the government policy indicator has no relationship to the quality of life. The qualitative findings are also presented to further strengthen existing findings through

quantitative methods. Based on interviews with ten informants, they stated that:

“... for me firstly, the result.. okay if we go out to sea, but there is zero result? It would not be fun to go out fishing without landing some... if we managed to land fish, it would be enjoyable. Only when we earn, we can spend and save”.

“... for me, the approach to employment and income.. today we look at the current needs...”

*everything is costly... fishermen need to work hard to earn a lot... then we can save up...*

*"To improve this, for me, the fisherman's effort...going out fishing at 10 in the morning you just wake up... if you're shy, embarrassed, too lazy to work, don't even dream of achieving success..."*

In the religious contexts, the majority of the fishermen see religion as important in life. Some of the verbatim obtained from the interviews are as follows:

*"... to enhance and improve fishermen's life, I think that it is important that children are sent to school, given religious education, the balance of both between religious beliefs and other factors."*

*"...for me, religion is important... then the outcome and the education... education, for me, is lifelong learning..."*

*"...our life... it is important if we follow the rules... back to basic, to religion and its do's and don'ts... if we ignore and do not follow the do's and don'ts... how we earn money should come from the right channels... then will it be blessed... our life would be blessed... but if the way we earn money is wrong...how is it possible for our rezeki to be blessed..."*

Furthermore, multiple linear regression methods have been used to verify the most important indicators in influencing the quality of life of the fishermen in Malaysia. Through multi-linear regression analysis, the study found five significant indicators affecting the quality of life of fishermen in Malaysia, namely housing, expenses, income, ownership and religion (refer Table 4).

Table 4 Test of Hypotheses: Quality of fishermen life in Malaysia

IKHNM Indicators	Unstandardised Coefficients		t-stat	Sig.
	B	Std. Error		
Constant	0.369	0.303	1.216	0.225
Income	0.191	0.033	5.862	0.000
Expenses	0.330	0.040	8.314	0.000
Saving	-0.059	0.026	-2.239	0.026
Ownership	0.112	0.031	3.598	0.000
Housing	0.420	0.029	14.434	0.000
Religion	0.200	0.036	5.621	0.000
Government Policies	-0.029	0.031	-0.934	0.351
R Square	0.673		F-stat.	161.613
Adjusted R Square	0.669		df.	6
Std. Error of the Estimate	0.951		Sig.	0.000 <sup>b</sup>

a. Variables: (Constant), Religion, Saving, Housing, Expenses, Ownership, Income

a. Reliable Variables: Quality of Life

The table above suggests that the quality of life indicators proposed in this study can explain its impact on the quality of life of the fishing community in Malaysia by 67.3%. The remaining 32.7% was contributed by other indicators not included in the study. In addition to the information regarding variable contributions, this study found that the proposed indicators significantly affect the quality of fishermen's life in Malaysia with the coefficient of F-stats = 161,613 and significant at the 1 percent level.

In line with the objectives of this study, the study found that the most dominant indicator affecting the quality of life of the fishermen community in Malaysia is the housing indicator. Based on the results of the data analysis, the study obtained a regression coefficient value for the housing indicator of 0.420 with the value of 14.434 and

significance at the 1% level. This suggests that with the assumption of housing indicators rising by 1%, the quality of life of the fishing community in Malaysia will increase by 42%. Next is the expenses indicator with a coefficient value of 0.330 or 33%, religion indicator of 0.200 or 20%, and an income indicator of 0.191 or 19.1%. While the indicator of ownership only contributes about 11.2% to the quality of life.

## 5 Conclusion

Based on the findings and discussions in the previous section, the following conclusions are reached. (i) The Quality of Life Indicators according to the actual needs of the fishing community are different from those used by the government to measure their quality of life (IKHM). (ii) There are

seven indicators that have been proposed through an interview, FGD and literature review, namely Earning/Income, Expenses, Savings, Ownership, Housing, Religion and Government Policies. (iii) All seven proposed indicators have a significant relationship with the quality of life of the fishing community in Malaysia, while one indicator (government policies) has no significant relationship with the quality of life of fishermen. (iv) The housing indicator is the most dominant indicator of the quality of life of the fishing community in Malaysia and (v) Religion indicator has been successfully proposed to measure the quality of life and is found to be a significant indicator influencing the quality of life of fishermen in Malaysia. Therefore, this study suggests that the Malaysian government needs to provide good and comfortable housing to its fishing community. Religious programmes should also be enhanced in the fishing community, especially to the second generation of fishermen.

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