

Assessing the Effects of Physical and Mental Health on Quality of Life at Flood Transfer Center

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Abstract: The East Coast of Peninsular Malaysia experiences monsoon season every year and this region normally hit by the flood. The frequent occurrences of flood pressure the victims with physical and mental health issues at temporary flood transfer center. Results from previous studies found that the low quality of life in the flood transfer centers exist due to the inadequate of food supply, misunderstanding between evacuees, the congestion of flood transfer centers and the unsuitable and insufficient equipment used worsen the conditions. Therefore, this study aims to assess the effects of physical and mental health status and quality of life at temporary flood transfer center. This study applies a quantitative approach by conducting a survey in seven flood transfer centers in the first wave of flood in east coast Malaysia. Questionnaires are administered using face to face method and 106 participants participated in this study during the first wave of flood in 2017. Analysis of data is carried out using correlational and scatter plot of analysis. Findings indicate that physical and mental health are related directly with Quality of Life. It is therefore important to provide both physiological consultation and physical support to the victims to the increase the quality of life in the flood transfer center.

Key words: quality of life, flood transfer center, correlation, mental health physical health

INTRODUCTION

Floods are the most common type of natural disaster in Malaysia. Frequent occurrence of flood usually happens in the east coast of Malaysia during the monsoon season. The impacts of climate change are additional factor which is likely to increase the occurrence of flooding in this region. Major flood events have hit east coast Malaysia in 2013 and 2014 and had caused large evacuations of the population in the affected area. While in 2017, there are few waves of flood events in east coast of peninsular Malaysia. During the flood, effects suffered by the victims are in different ways. The suffering is not only limited to the damage of property and possessions but physical and mental health may be affected during and after flooding. The consequences of flooding also affect flood victims' daily activities.

Results from previous studies found that the low quality of life in the flood transfer centers exist due to the inadequate of food supply, misunderstanding between evacuees, the congestion of flood transfer centers and the

unsuitable and insufficient equipment used worsen the conditions for the flood victims who were evacuated in transfer flood center. Being place in flood center with unfamiliar people may cause invasion of personal space and privacy [1]. In addition, [2] stated that privacy of personal space is universal need in human being in which, trespassing this space would lead to stress, worry, and aggression. This leads to a low of quality of life during their stay at flood transfer center.

During the flood events, wellbeing of individuals become an issue that always been highlighted. Changes of routine and place will sometimes strain the flood victims in their daily life and subsequently affect the quality of life. The decision to leave home and to move to the evacuation center is an unpleasant experience [3][4]. This condition will burden to those who have mental and physical health issues. Thus, flooding can challenge the psychosocial resilience of the hardest of people who are affected [5]. People who are involved in flood disasters may have extensive effects on health, and welfare

without the support of their families, friends and colleagues. This study therefore, has been carried out to investigate whether the stressful event caused by floods will change the quality of life due to physical and mental of health of the victims. Specifically, the objective of this study was to assess the effects of the constructs of physical and mental health status and quality of life at flood transfer center. Usually, the efforts to investigate and evaluate quality of life, social functioning, health status and wellbeing are only within clinical contexts. Nonetheless, this study will highlight the association of mental and health with quality of life in social science and in words of layman.

Study on Quality of Life (QoL), Physical and Mental Health

The Quality of Life (QoL) has been widely used in social science and measure of social development and living standard. It is very sensitive and comprehensive index in reflecting the changes in living condition. Quality of life has been defined as the individual's perception of his position in life in the context of cultural and value systems, in relation to his objectives, beliefs and expectations [6]. While, [7] explains quality of life as the dynamic interaction between social, health, economic, and environmental condition that would shape human and social development. The concept of quality of life spans a wide range of topics and disciplines, it has been measured using a diverse range of indicators. Most disciplines have based their concepts and measures on experts' opinions, rather than those of lay people [6]. Most of the recent years, the QoL has been used to evaluate the impact of physical and mental in terms of medical science. It is therefore important to be able to measure and value quality of life in a way that is suitable for inclusion within social science perspectives which also encompasses the multitude factors that may influence quality of life.

World Health Organization (WHO) defines health as a state of complete physical, mental and social wellbeing. One of the dimensions of health is physical health which includes social, intellectual, emotional, spiritual and environmental health. While, mental health, psychological resources and outlook are also key components of successful ageing and wellbeing [8]. According to [9], one's well-being or quality of life is geared towards how a person can live a normal and quiet life, capabilities to lead to a more meaningful social life, joy and satisfaction, and achieve physical and mental ability. Thus, good levels of physical and mental health status have been long widely associated with well being and overall quality of life.

In order to study the health and mental issue, life events theory is one of the most relevant theories that can be applied. This theory has been introduced by [10] and [11]. The theory stated that the occurrence of specific events in life can have impact on individual physical and mental self. The incident happen will raise the coping behavior and adaptive but it will lead to a negative pressure that affect a daily life. Based on this theory or the integrated theories, researchers such as [1] [3] [12] [13] have investigated related issue on the impact of flood event. [13] indicates the role of psychological factors or mental health have significant effect toward quality of life. In addition, [13] also proposed in the future study to investigate the variables that act as mediators to measure the impact to quality of life included cognitive mechanisms such as belief or spirituality elements. While [3] stated victims are regularly plagued by flooding that has happened before. This gives rise to stress and anxiety among flood victims. The depressed victims decreased the quality of life. Almost similar study with [3][12] relate stress, anxiety and depression with flood victims. This study suggests that there should be needs for social support to overcome the stress among the flood victims. While [1] focus on the traumatic disorder and quality of life among the flood victims. Based on various demographic variables of flood victims in Kelantan finding indicates that there is significant difference in traumatic disorder which affect the quality of life between gender, ethnic groups and age groups amongst participants of their study

While, study such as [14] has examined the relationship between physical and mental of health with Quality of life during the 2007 flood in Johor. [14] believe that physiological effect is equally important as physical effect loses during the flood event. This study found there is a relationship between psychological wellbeing and disaster among different group of who were involved directly in the disaster. Similar to [1], the effects found on the disaster victims differ from individual based on age, gender, and experience of flood.

Findings by [4] have shown that there are issues that arise in the distribution of disaster relief. It is reveals that the assistance provided to victims is irregular, inadequate support and assistance is also slow. The victims who have been transferred to evacuation centers that established by the government expect help from the government to reduce the suffering and the burden faced by the victims. Those who have physical and mental problem are going to have more difficulties to adjust in the flood transfer center. They are more vulnerable to disastrous events of flood.

METHODOLOGY

Sampling and procedure

The population for this study was selected from flood victims in east cost Malaysia. During the first wave of flood event in 2017, questionnaires are distributed to flood victims in flood transfer center in Kelantan and Terengganu. Population sample in Pahang is excluded as the first wave of flood only

occurred in both states. Permission was first obtained from the authority of the targeted flood. After receiving approval, the researcher would ask for the willingness of the respondents to participate in the survey process. Seven flood transfer centers are chosen which involves five districts. 106 sets of questionnaires are distributed face to face which 100% of the questionnaires are returned.

Table 1: Demographic profile

Demographic data	Frequencies
Gender	
Male	33 (31.1)
Female	73 (68.9)
Age	
Below 20	1 (0.9)
21 to 40	41(38.7)
41 to 60	46 (43.4)
61 and above	18 (17)
Education	
PMR/SRP below	61 (57.5)
SPM above	45(42.5)
Marital Status	
Single	6 (5.7)
Married	89(84.0)
Others	11(10.4)

The participants represented a variety of ages, level of education and marital status. The total number of sample used was 106. Gender was coded as 1 (male) and 2 (female). 68.9% of the participants are female. There are four codes for age where most of the participants in answering questionnaires are 21 to 40 years old (38.7%) and 41 to 60 years old (43.4%). In terms of education level 57.5% have PMR/SRP and below and the rest (42.5%) have SPM and above. Most of the participants are married (84.0%).

Data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 22.0. SPSS was used to process and analyze the

data from the questionnaire that include respondent’s demographic data and score.

FINDINGS AND DISCUSSION

Correlations coefficients are computed between overall scores. This is to determine the magnitude and direction of relationship of each variable. The correlation coefficients among the study variables are presented in Table 2.

Table 2: Correlation of QoL and health.

	Quality of life	Physical health	Mental health
Quality of life	1	0.394 0.000	0.511 0.000
Physical health	0.394 0.000	1	0.466 0.000
Mental health	0.511 0.000	0.466 0.000	1

**Correlation is significant at 0.01 level of significant.

The physical health and mental health are correlated with moderate relationship. Nonetheless, the study found there is significant relationship between quality of life and physical health and mental health. Physical health correlated with quality of life at significant value less than 0.01 ($r=0.394$). On the other hand, the mental health indicates $r=0.511$ and significant with $p < 0.01$. Both physical and mental health have positive relationship with quality of life. It shows physical health and mental health will move in parallel with quality of life.

Using a simple scatter plot showing the relationship between physical and mental health with quality of life, findings reveal that there are linear and positive relationships between these variables. The finding demonstrates that the higher the physical and mental health, the better the quality of life. In contrary, the lower the physical and mental health the lower quality of life for the flood victims at flood transfer center.

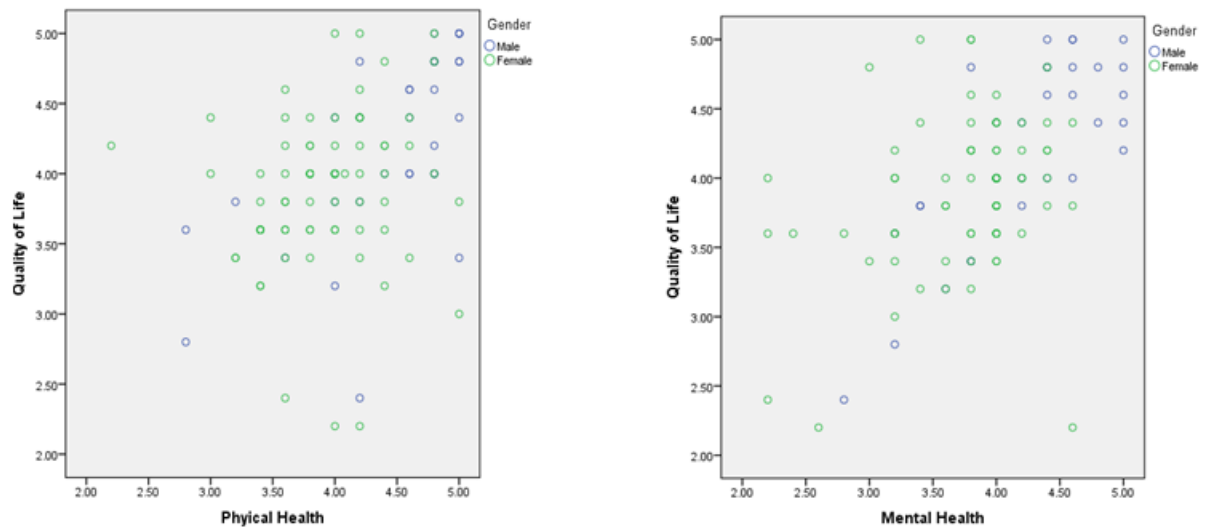


Figure 1: Scatter plot

The finding of the study is parallel to the study by [3][13][14]. [13] have indicates that the role of psychological factors or mental health have significant effect toward quality of life. While this finding will almost similar to the other cases of flood victims in other parts of Malaysia. The result supports the finding in the case of Johor who was examined by [14]. They found relationship psychological wellbeing with Quality of life in flood transfer center. While, [3] also have shown the depressed victims during the flood will have decreased the quality of life. This result is also in line with the finding by [4]. The issues that arise in the distribution of disaster relief lead to lower the quality of life to those who have problem in physical and mental health. Overall, this study shows a similar pattern of the findings as compared to the previous studies. In the case of east coast Malaysia the findings reveal that physical and mental health will have effects on the quality of life.

CONCLUSION AND RECOMMENDATION

This study has been carried out to investigate whether the stressful event caused by floods will change the quality of life due to

physical and mental of health of the victims. It has investigated and evaluated quality of life out of clinical contexts. The result suggests that there is relationship between physical and mental health towards quality of life. Those who are lack of physical and mental health will have lower quality of life at flood transfer center. It is therefore important to provide both physiological consultation and physical support to the victims in the flood transfer center to the increase the quality of life. With the growing number of victims each year due to the unpredictable weather, much needs to be done in order to ensure the quality of health and well being.

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