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FACTORS AFFECTING QUALITY OF LIFE OF MEDICAL ASSISTANCE RECIPIENTS OF ZAKAT FUND IN MALAYSIA

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ABSTRACT

Poor people generally have difficulty in accessing good healthcare services. This can consequently lead them to have a lower quality of life. This paper investigates whether *zakat* medical assistance helps improve the health of the *aṣnāf* (*zakat* recipients) and in turn upgrade their quality of life. The crosstab analysis of 60 respondents in Penang, Kelantan and Negeri Sembilan in 2014 shows that 93.4 percent of the *aṣnāf* reported that *zakat* medical assistance has increased their quality of life. Meanwhile, multiple regression analysis shows that among the predictors of health, income and education, health status is the significant predictor of quality of life of the *zakat* recipients. These findings would be useful for policy makers, especially the State Islamic Religious Councils, in order to focus on improving the level of quality of life of the *aṣnāf* and continue to increase the allocation of medical financial assistance from *zakat* to the eligible *aṣnāf*. At the micro level, the medical assistance rendered would help improve both health status and quality of life. As a result, *zakat* has great potential to be one of the economic tools to alleviate poverty among Muslims in Malaysia.

JEL Classification: I12, I15, I131, P46

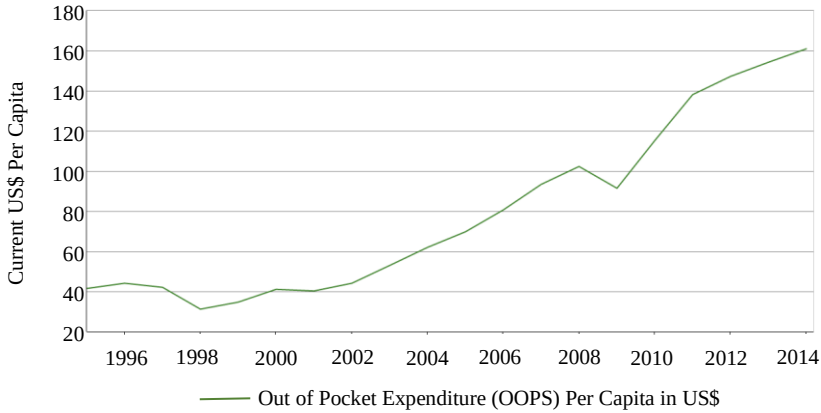
Key words: *Zakat*, Health status, Quality of life, Multiple regression analysis

1. INTRODUCTION

Rising medical cost has become a major concern for almost all countries in the world. The increase in health care costs is due to

technological advances besides the higher expectations by patients (World Health Organization, 2007). This matter has gained attention of policy makers due to its pronounced growth which may result in government budget deficit following higher spending on public health care. The high growth in medical costs which represents medical inflation, increased on average by about 9 percent each year, while the average inflation rate is only around 3.5 percent (Aon Hewitt, 2015). This implies medical cost grows at a rate more than twice the growth in average inflation; this is worrying to the middle and low income earners who face potential increase in medical bills as well as increased premiums for their insurance plans. The condition worsens in the case of high medical bills, associated with high medical debt, thus leading to increased probability of default or bankruptcy (Scitovsky, 2005). Statistics from the World Health Organization (WHO) show that the share of out-of-pocket expenditure from the total expenditure for health care increased from 34 percent in 1995 to 36 percent in 2013. Meanwhile, total out-of-pocket expenditure (at 2005 constant price) increased from US$872 per capita in 1995 to US$3,021 in 2013 (WHO, 2017). In 2015, the National Health and Morbidity Survey reported that total out-of-pocket health expenditure for the whole population of Malaysia (estimated at 29,374,436 people in 2015) was estimated at RM11,683 million. The burden of out-of-pocket spending creates barriers to health access especially for the low-income households (Ministry of Health Malaysia, 2015).

FIGURE 1
Per Capita Out-of-Pocket Expenditure in Malaysia, 1995–2014



Source: WHO (2016).

Malaysia's health care system is also affected by these developments whereby Malaysians have to pay higher medical costs especially in the private health sector. The per capita out-of-pocket health expenditure for Malaysia was estimated to be US$41.47 in 1995 and increased to US$160.91 in 2014 (WHO, 2016). Figure 1 shows the trend in per capita out-of-pocket expenditure from 1995 to 2014 in Malaysia. The pattern shows moderate increase in per capita out-of-pocket expenditure from 1999 to 2008, before registering a slight decrease in 2009. However, the upward pattern showed a steep increase in 2010 signifying the high growth in medical costs before continuing to increase steadily in 2012. Overall, it shows a persistent increase with some corrections in the market due to some structural breaks in the economy.

According to economic theory, good health not only affects quality of life but also economic development of the country. This highlighted the importance of alternative sources of funding to help accommodate health care for low-income earners and people-in-need. In Malaysia, there are two possible alternative channels of funding for reducing the burden of high medical costs for low income households; Non-Governmental Organizations (NGOs) as well as religious-based organizations. Muslims identified as *aṣnāf* are entitled to receive medical coverage from *zakat* allocation. *Zakat* is the most important economic source for Muslims other than *waqf* and *māl*. An Islamic country needs to manage its *zakat* resources efficiently to build a strong economy and for social development. In economic development, *zakat* allocation to the poor and needy helps to increase aggregate demand and stimulate economic growth (Kadri et al., 2012). According to Kadri et al. (2012), the function of *zakat* in Malaysia needs to be expanded in order for the country to achieve high-income nation status by 2020. Thus, continuous efforts to improve *zakat* management in line with current economic changes are crucial. Among the improvements in *zakat* management is by diversifying the types of *zakat* assistance according to the current needs of the *aṣnāf*. In Selangor, for instance, besides the eight *aṣnāf* groups mentioned in the Qur'ān, *zakat* assistance is allocated based on six aspects of the *aṣnāf's* needs such as shelter, food, clothing, transportation, education and health. For the medical needs, the eligible *aṣnāf* will receive optimum funding since the medical costs for various diseases have been increasing. For instance, in Selangor, Lembaga Zakat Selangor (LZS) allocated more than RM25 million in 2010 for financing the medical costs of the eligible *aṣnāf*. This amount has been increasing from RM15.78 million in 2008 to RM23.17 million in 2009 (Abdul

Hamid, 2011). With the increasing medical costs, the amount allocated for health care from the *zakat* fund is also increasing yearly.

This paper aims at investigating whether *zakat* medical assistance helps improve the health of the *aṣnāf* and in turn upgrade their quality of life. Without financial support from other Muslims, the poor and needy face difficulties in receiving quality health care treatment since they cannot afford to bear the costs especially if they are diagnosed with chronic diseases or seek treatment at a private health facility. Furthermore, when they fall sick for long periods, it will prevent them from working and earning income for the household. When their income is adversely affected, it becomes challenging for the poor and needy to survive and this will also influence their quality of life (Wahid, Abdul Kader and Ahmad, 2012). While *zakat* allocation for medical assistance currently covers only treatment costs, dialysis and permanent illness, it is hoped that the coverage will be extended to other aspects of health care, such as preventive care, health education, health promotion and health care development. Realizing the importance of helping the poor and needy who are burdened with medical costs, this study is conducted to identify the factors influencing the quality of life of the *aṣnāf* in three selected states (Penang, Kelantan, and Negeri Sembilan).

This paper contributes to the limited but growing literature on the impact of *zakat* assistance in general and medical assistance in particular toward the quality of life of the *aṣnāf*. This paper is organized as follows: Section 2 reviews related literature on the effects of *zakat* on poverty and economic development; Section 3 describes the data and empirical models used in the estimation; and Section 4 discusses the results. Finally, Section 5 concludes with some policy implications.

2. LITERATURE REVIEW

Good health leads to increase in quality of life, reduced levels of educational failure, reduced insecurity and unemployment and improved household standards. Thus, it is expected that better quality of life leads to higher health status. Quality of life is multidimensional. It covers five dimensions which are physical wellbeing, material wellbeing, social wellbeing, emotional wellbeing, and development and activity (Felce and Perry, 1995). Under the physical wellbeing dimension, health is an essential part of the quality of life of citizens since poor health conditions mean that a significant part of the

population is unable to benefit from the general progress of society or actively engage in civic activities (Eurostat, 2013).

Many studies have proven that better socioeconomic status leads to higher health status. In Belgium, Van der Hayden et al. (2003) investigated socioeconomic status differences in the use of health services and proved that the lower socioeconomic groups visit the general practitioners, nursing care facilities and hospitals more often than persons with high socio-economic status. Logistic regression was conducted using data from the 1997 Belgian National Health Interview Survey. In Canada, individuals with lower incomes and fewer years of schooling visit specialists at a lower rate than those with moderate or high incomes and higher levels of education (Dunlop et al., 2000). In the study, they used a multiple logistic regression (i.e., a two-staged least square method) using data from the 1994 National Population Health Survey. In Italy, Piperno and Di Orio (1990) showed that less educated groups use general practice and paediatric services more often than the highly educated groups whereas in Belgium, Bossuyt et al. (2004) showed that people with low education levels have shorter lives than people with higher education levels.

In an Islamic state, *zakat* has been recognized as an economic tool with a significant role in enhancing economic development of a country both at micro and macro level (Azam, Iqbal and Tayyab, 2014). At macro level, Yusoff (2006) highlighted the important role of *zakat* in determining the equilibrium national income and employment of a country. *Zakat* has also proven to alleviate poverty among the poor, needy, destitute, orphans and widows in a study by Akram and Afzal (2014) in Pakistan, Ali and Hatta (2014) in Bangladesh and Sahn (2012) in Africa. According to Kahf (1997), *zakat* implementation has indirect effects on productivity, employment and the amenability of *zakat* as an economic tool. Similar findings have been reported by Akram and Afzal (2014). They found that *zakat* enhanced economic activities, raising employment, and also improving the standard of living of the *aṣnāf* in Pakistan.

A study by Salleh and Ngah (1980) in Malaysia has shown that *zakat* has improved paddy planters' income in Perak, Kedah, Kelantan and Terengganu. Meanwhile, studies by Ibrahim (2006, 2007, 2008) showed that *zakat* significantly reduced poverty and stimulated economic growth. In particular, Ibrahim (2006) studied the effects of *zakat* allocation in reducing poverty in Selangor using data from 2001 and 2002. By comparing five different poverty indices she proved that *zakat* is able to reduce the poverty rate, poverty gap and income gap. Later, Ibrahim (2007) discussed the relationship between

zakat and economic growth and found that *zakat* distribution has succeeded in closing the gap between the rich and poor and eventually reduced the poverty rate. Other studies by Ibrahim (2008), Mohd Ali et al. (2013), Embong et al. (2013) and Kadri et al. (2012) also found similar results. From the previous studies it is clear that the focus was more on the contribution of *zakat* (as a whole) in enhancing the economic wellbeing of a country. Very limited studies look at the contribution of specific *zakat* assistance such as *zakat* for education and healthcare from the social wellbeing perspective.

Small numbers of published empirical studies have looked at the effects of *zakat* on social wellbeing. Using the logit model, Wahid et al. (2004) looked at the effects of *zakat* in improving the quality of life of the poor and needy. The results showed that *zakat* is positively significant in improving the quality of life among the poor in terms of social participation and education in Pahang, Perak and Sabah. Meanwhile, Abu Bakar (2012) studied the effects of business assistance from *zakat* on the quality of life of the *aṣnāf* in Kedah. He found that business assistance from *zakat* is able to help the *aṣnāf* escape poverty and reach the minimum quality of life standard. By integrating the five elements of human needs as stipulated in *maqasid shariah* (i.e. to preserve religion, life, wisdom, inheritance and wealth) and Maslow's hierarchy of needs, *zakat* distribution efficiency has increased in Kelantan (Zakaria and Abdul Malek, 2014). This study suggests that non-monetary needs are also important in enhancing the living standards of the *aṣnāf*.

Previous studies have shown that limited studies have been conducted to look at the effectiveness of *zakat* assistance specifically for health on quality of life especially among the poor, needy and *ghārimīn*. Thus, this study attempts to show that *zakat* assistance for medical needs can help improve income level, hence, the quality of life of the selected *aṣnāf*.

3. METHODOLOGY

3.1 DATA SOURCES

This research was a cross-sectional study utilizing data from three selected states in Peninsular Malaysia, namely Penang, Kelantan and Negeri Sembilan. For the analysis, a total of 60 respondents who received medical assistance from *zakat* funds were surveyed in 2014. These three states were selected based on the region they represent (i.e., Negeri Sembilan from the southern region, Penang from the northern region and Kelantan from the east coast region). The sample

size is small for a few reasons. Among them, the State Islamic Religious Councils are not allowed to share the database on the *aṣnāf* because of confidentiality concerns. Furthermore, the data collection in Kelantan was conducted after the big flood in 2014. Thus, many houses were badly damaged and it was difficult for the enumerators to locate the houses of the *aṣnāf*.

A survey questionnaire was used to evaluate *zakat* assistance effectiveness for medical coverage in improving the quality of life among the poor and needy in Penang, Kelantan, and Negeri Sembilan. The questionnaire items were constructed based on the quality of life indicators stated by the World Health Organization (WHO) such as physical health, psychological health, level of independence, social relationship, environment and spirituality, religion and personal belief.

The survey questionnaire comprised five sections. Section A covers respondent demographic information such as age, gender, occupation, income, marital status, and so forth. Section B contains questions on the quality of life of the *aṣnāf* while Section C asks for information on medical assistance from the *zakat* fund such as the amount, types and frequency of *zakat* assistance, and so forth. In addition, using the Likert scale, Section D covers the level of satisfaction of the *aṣnāf* and Section E covers the factors that can increase the health status from the respondent's perspective. Descriptive analysis of the data was presented using frequency table and cross tabulation analysis while inferential statistics were conducted using a standard Ordinary Least Square (OLS) analysis.

3.2 MULTIPLE REGRESSION ANALYSIS

The determinants of quality of life as identified by WHO are income and social status, education, physical environment, social support networks, genetics, health services and gender (WHO, 2016). Using available data collected from the 60 *aṣnāf*, a standard OLS regression was conducted to test whether income, education and health are affecting their quality of life. The dependent variable used in the regression is quality of life (QoL) represented by the average of responses that measure quality of life in the questionnaire. The average of quality of life was calculated by taking the rating level in Likert scale of 8 questions measuring quality of life. Meanwhile, the independent variables are monthly household income (INCOME), education represented by number of years in school (EDUC) and health status represented by a dichotomous variable indicating

whether the respondent has good health or not (HEALTH). The regression model is given by the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_t \quad (1)$$

where X_1, X_2 and X_3 are the predictor variables of income, level of education and health status respectively. The final model that fit to the data was given by:

$$QoL = \beta_0 + \beta_1 INCOME + \beta_2 EDUC + \beta_3 HEALTH + \varepsilon \quad (2)$$

4. FINDINGS

A total of 60 respondents answered the questionnaire. Table 1 shows the profile of all respondents. Based on the responses, the statistics show that 56.7 percent of respondents are male and 43.3 percent female while 71.7 percent of the respondents are heads of household. In general, 32.3 percent of them are in the 41 to 50 years age group. In terms of education level, 35 percent of them had secondary school education (SPM). Most were unemployed (45 percent) while only 3.3 percent were working in the government sector. In terms of birthplace, the highest percentage of respondents came from Penang (30 percent). In terms of marital status, 75 percent were married while the highest number of dependents was 4 (20 percent). Some 51.7 percent earned a monthly salary below RM500 and only 3.4 percent earned RM2001 to RM2500. The majority of respondents have no disabilities (90 percent) and only 10 percent were disabled persons.

4.1 CROSSTAB ANALYSIS

Table 2 shows the cross tabulation analysis of the perception of medical *zakat* recipients of whether the *zakat* assistance has improved their quality of life by gender, occupation, physical condition, education level, marital status and residential status.

The results in Table 2 show that overall, 93.4 percent of the *aṣnāf* reported that medical *zakat* assistance has increased their quality of life. These findings indicate that medical *zakat* assistance has contributed to improved quality of life among the *aṣnāf* in Penang, Kelantan and Negeri Sembilan. Cross tabulation analysis by gender, occupation, physical condition, education level, marital status and residential status has shown that most respondents reported high percentage for the effect of medical *zakat* assistance on quality of life (above 90 percent agreed).

TABLE 1
Profile of Respondents

Demographic status	Frequency	Percentage
Status of respondent		
Head of Household	43	71.7
Member of Household	17	28.3
Total	60	100.0
Age (years)		
20-30	4	6.8
31-40	12	20.4
41-50	19	32.3
51-60	15	25.5
61-70	8	13.6
71-80	2	3.4
Total	60	100.0
Gender		
Male	34	56.7
Female	26	43.3
Total	60	100.0
Place of birth		
Penang	18	30.0
Kelantan	17	28.3
N. Sembilan	13	21.7
Others	12	20.0
Total	60	100.0
Occupation		
Self-employed	15	25.0
Government	2	3.3
Private	8	13.3
Unemployed	27	45.0
Housewife	8	13.3
Total	60	100.0
Physical condition		
Normal	54	90.0
Disabled	6	10.0
Total	60	100.0
Education level		
No Schooling	4	6.7
SRK	12	20.4
PMR/SRP	15	25.0
SPM	21	35.0
STPM/Diploma	5	8.3
Degree and above	2	3.3
Others	1	1.7
Total	60	100.0

TABLE 1 (Continued)

Demographic status	Frequency	Percentage
Marital status		
Single	6	10.0
Married	45	75.0
Divorced	8	13.3
Widow	1	1.7
Total	60	100.0
Number of dependent		
0	13	21.7
1	5	8.3
2	5	8.3
3	7	11.7
4	12	20.0
5	8	13.3
6	6	10.0
7	2	3.3
8	1	1.7
12	1	1.7
Total	60	100.0
Range of income (Monthly)		
RM 0- RM500	31	51.7
RM501-RM1000	17	28.3
RM1001-RM1500	3	5.1
RM1501-RM2000	4	6.8
RM2001-RM2500	2	3.4
RM2501-RM4000	3	5.1
Total	60	100.0

Source: Authors' estimation.

Comparison by gender shows that among male respondents, higher scores are reported with 94.1 percent stating that medical *zakat* assistance has changed their quality of life as compared to female respondents with 92.3 percent. Analysis by occupation shows that 96 percent of those who are working reported that medical *zakat* assistance has improved their quality of life while 91.4 percent of the unemployed reported the same.

Among the respondents with a physical condition, 100 percent reported that medical *zakat* assistance has improved their quality of life while 92.6 percent of respondents without any physical condition reported the same. Between different education levels, 100 percent of respondents with primary and tertiary education reported that medical *zakat* assistance has changed their quality of life, while 91.9 percent of the respondents with secondary education agreed that medical *zakat*

assistance has improved their quality of life, whereas 75 percent respondents with other types of education stated the same.

TABLE 2
Crosstab Analysis

Item	Has Medical *zakat* assistance changed your quality of life?		Total (%)
	NO	YES	
Overall	4 (6.6%)	56 (93.4%)	60 (100%)
Gender			
Male	2 (5.9%)	32 (94.1%)	34 (100%)
Female	2 (7.7%)	24 (92.3%)	26 (100%)
Total			60 (100%)
Occupation			
Working	1 (4.0%)	24 (96.0%)	25 (100%)
Unemployed	3 (8.6%)	32 (91.4%)	35 (100%)
Total			60 (100%)
Physical condition			
Normal	4 (7.4%)	50 (92.6%)	54 (100%)
Disabled	0 (0%)	6 (100%)	6 (100%)
Total			60 (100%)
Education level			
Primary	0 (0%)	12 (100%)	12 (100%)
Secondary	3 (8.1%)	34 (91.9%)	37 (100%)
Tertiary	0 (0%)	7 (100%)	7 (100%)
Others	1 (25%)	3 (75%)	4 (100%)
Total			60 (100%)
Marital status			
Single	1 (16.7%)	5 (83.3%)	6 (100%)
Married	3 (5.6%)	51 (94.4%)	54 (100%)
Total			60 (100%)
Residential status			
Rural	3 (8.8%)	31 (91.2%)	34 (100%)
Urban	1 (3.8%)	25 (96.2%)	26 (100%)
Total			60 (100%)

Source: Authors' estimation.

Cross tabulation analysis of marital status shows that 94.4 percent of married respondents agreed that medical *zakat* assistance has changed their quality of life; 83.3 percent of single respondents agreed with the statement. Analysis by residential status shows that 96.2 percent and 91.2 percent of the respondents who live in urban and rural areas respectively stated that medical *zakat* assistance has changed their quality of life. In conclusion, based on the survey

responses, medical *zakat* assistance has significantly improved the quality of life among the needy, poor and *ghārimīn* which can be an indicator for the State Islamic Religious Councils to continue allocating medical *zakat* assistance to the eligible *aṣnāf*.

4.2 MULTIPLE REGRESSION ANALYSIS

All variables in the model have been checked for possible errors. The model used robust standard errors to control for heteroskedasticity. The *p*-value of the model is lower than 0.05 (0.0275) indicating a statistically significant relationship between the predictors and the dependent variable. Table 3 shows the OLS regression results.

TABLE 3
OLS Analysis

Constant	2.7896
	(0.1592)
HEALTH	0.5107**
	(0.1987)
EDUCATION	0.0062
	(0.0220)
INCOME	0.00002
	(0.00007)
R^2	0.1555
$F(3, 55)$	3.28
p-value	0.0275
No. of observations	60

Note: Standard errors are reported in parentheses. *, **, *** indicates significance at the 10%, 5%, and 1% levels, respectively. Dependent variable: Quality of life.

A linear regression established that health status could statistically and significantly predict quality of life, $F(3, 55) = 3.28$, $p = 0.0275$ and health status, education level and income accounted for 15.6 percent of the explained variability in quality of life. In the analysis, education and income were not significant in affecting quality of life of the *aṣnāf*. The results show that health status is an important determinant of quality of life. *Aṣnāf* with better health conditions will have higher quality of life than *aṣnāf* with poor health conditions by 0.5107 health rating level. These findings support the findings of most previous studies (Bossuyt et al., 2004; Dunlop et al., 2000; Piperno and Di Orio, 1990; Van der Hayden et al., 2003). Thus, the Ministry of Health, the State Islamic Religious Councils and related agencies either directly or indirectly should conduct more

programs for improving *aṣnāf* health; better health will improve their quality of life.

In improving the quality of life among the *zakat* medical assistance recipients, the policy makers should also try to address the *aṣnāf's* ability to conduct daily activities (including *ibadah*), ability to work, provide good social support for the *aṣnāf*, provide a comfortable accommodation and improve health services availability. A minimum standard or index for a good quality of life based on *maqasid shariah* needs to be developed as a guideline for the policy makers to meet the minimum requirement of standard of living for the *aṣnāf*. Future research might empirically look into the effects of different types of *zakat* assistance on the *aṣnāf* quality of life.

5. CONCLUSION

Due to the rising cost of medical care, the search for alternative sources of funding to help accommodate health care for low-income earners and people-in-need is crucial. In Malaysia, z*akat* is the most important economic source for Muslims other than *waqf* and *māl māl*. Nowadays, besides the eight *aṣnāf* groups mentioned in the Qur'ān, *zakat* assistance is allocated based on six aspects of the *aṣnāf's* needs which are shelter, food, clothing, transportation, education and health. Based on statistics, the *zakat* proportion allocated for health of *aṣnāf* has been increasing gradually. The question arises as to what extent the medical *zakat* assistance has improved the quality of life among aṣnāf. Thus, this study examines the importance of medical *zakat* assistance in improving the quality of life for the needy, poor and *ghārimīn* in Malaysia. The impact of health status on quality of life was also examined.

Results from a survey questionnaire distributed to 60 *aṣnāf* who received medical *zakat* assistance in Penang, Kelantan and Negeri Sembilan show that *zakat* assistance has significantly improved the quality of life among the needy, poor and *ghārimīn*. Furthermore, the multiple linear regression analysis uncovers that health has a significant positive relationship with quality of life. The results support the State Islamic Religious Council efforts to continue and increase medical financial assistance allocation to the eligible *aṣnāf*. Future research should embark on investigating the effect of medical *zakat* assistance on various quality of life aspects for instance, employment, wealth and finance.

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