

Correlation Between the Characteristics and Quality of Life of Hypertensive Outpatients at a Private Hospital in Yogyakarta

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Abstract—Many factors can affect a person's quality of life, including therapy with antihypertensive drugs that often have uncomfortable side effects and lead to decreased quality of life. This study aimed to determine the statistical relationship between the characteristics and quality of life of hypertensive outpatients at a private hospital in Yogyakarta, Indonesia. This cross-sectional study used the EQ5D questionnaire to measure the quality of life of 56 respondents, who had met the inclusion criteria, after three months of antihypertensive therapy. The data were processed by scoring the questionnaire items and then converting the EQ5D dimensions to EQ5D Index based on the Malaysian value set. The data analysis also included descriptive statistics andchi-square test. The results showed that the quality of life, as represented by the EQ-5D index, ranged from 0.375 (lowest) to 0.933 (highest). The severe problems in the quality of life were identified in three dimensions, namely anxiety/depression (7.14%), pain/discomfort (5.36%), and usual activities (3.57%). Meanwhile, difficulties were not found in the other two dimensions, namely self-care (89.29%) and mobility (55.36%). The results showed that the patients' characteristics, namely sex, age, employment, education, and complication, correlated with quality of life at different levels (*p*-values), i.e., 0.350, 0.418, 0.992, 0.726, and 0.099, respectively. As a conclusion, there is no significant relationship between patients' characteristics and quality of life (*p*-values> 0.05).

Keywords—characteristics, quality of life, hypertensive, outpatient.

I. INTRODUCTION

Quality of life has been found to correlate with depression, family support, gender, education level, marital status, occupation, income, and the clinical stage of the disease (*p*<0.05) [1]. Depression is included in the psychological dimension, and in hypertensive patients, this dimension is mostly the cause of poor quality of life [2]. The EQ-5D method can measure the quality of life of patients with hypertension. It is one of the most common HRQOL methods that covers five health dimensions, namely mobility, self-care, usual activities, pain/discomfort, and anxiety/depression [3]. The side effects of therapy with antihypertensive drugs are often unpleasant and, therefore, can lower patients' quality of life [4]. This correlation is assumed to emerge from hypertensive complications [5]. The majority of hypertensive outpatients have a reduced quality of life, which is primarily caused by hypertension that has developed into more severe complications [6].

The study aimed to determine the relationship between the characteristics and quality of life of hypertensive outpatients in a private hospital in Yogyakarta, Indonesia.

II. METHODS

This study has been granted ethical approval from the research ethics committee of Ahmad Dahlan University. Also, following the guidelines of the Good Clinical Practice, it had received signed informed consent from 56 respondents who had met the inclusion criteria. The study was carried out with a cross-sectional design that used the EQ5D questionnaire to measure the quality of life of the respondents after three months of antihypertensive therapy. The EQ5D questionnaire items with the answers of the respondents were scored, then the EQ5D dimensions were converted to EQ5D Index based on the Malaysian value set. The scores were subjected to univariate analysis (descriptive) and bivariate analysis using the chi-square test.

III. RESULTS AND DISCUSSION

Around two-thirds of the 56 respondents who fulfilled the inclusion and exclusion criteria were female (67.86%), aged ≥ 60 years old (67.86%), and unemployed (69.64%) and had medium-to-high education (62.5%). Also, more than half of them suffered hypertension with complications (60.71%), Diabetes Mellitus as the most common complications (82.35%), and good quality of life (58.93%). Based on the EQ-5D Index, the quality of life of the respondents varied between 0.375 (lowest) to 0.933 (highest) with an average of 0.777. If the EQ-5D Index was higher than the average value, then the quality of life was categorized into good. If it was lower, then the quality of life was considered as poor or bad. The proportion of patients with good quality of life was 58.93%, which was higher than the ones with poor quality of life (41.07%). This finding is different from the study in Ulin Banjarmasin Hospital where the quality of life of its hypertensive outpatients is mostly below the average value, i.e., 73.8% with poor quality of life and 26.2% with good one [6]. Details on the quality of life of hypertensive patients based on the EQ-5D dimensions are presented in Table 1.

TABLE I. THE QUALITY OF LIFE OF HYPERTENSIVE PATIENTS BASED ON THE EQ-5D DIMENSIONS

EQ-5D Dimensions	Proportions (%)		
	1 (No problems)	2 (Moderate problems)	3 (Extreme problems)
Mobility	55.36	44.64	-
Self-care	89.29	10.71	-
Usual activities	75.00	21.43	3.57
Pain/discomfort	42.86	51.79	5.36
Anxiety/depression (sadness)	57.14	35.71	7.14

Based on the EQ-5D dimensions of quality of life, the hypertensive patients experience extreme problems mostly on anxiety/depression. A study at Gianyar I Health Center has found that the psychological dimension contributes to 70.4% of the reduced quality of life of the patients [7], which is in contrast to the research in Rendang Health Center that has identified this dimension as the most contributor to good quality of life, i.e., 61.7% [2]. In this study, 7.14% of the hypertensive patients felt that anxiety/depression was an extreme problem, and 35.71% of them experienced moderate difficulties with it. On the contrary, the remaining 57.14% did not encounter any issues with anxiety/depression.

The hypertensive patients felt that the largest percentage of their problems came from the dimension of pain/discomfort. Around 5.36% of them experienced severe pain/discomfort, while more than half of them (51.79%) experienced moderate pain/discomfort. The remaining 42.86% did not have problems in this dimension. These findings are in line with a previous study [3] that has recognized pain/discomfort as an extreme problem in 1.72% of patients.

In terms of self-care, most patients did not convey any severe problems. Up to 10.71% felt that self-care was moderately problematic, while the other 89.29% did not have issues with this dimension. In general, patients can still perform basic care by themselves, as established in [3] that claims only 7.5% of its research subjects experiencing self-care problems.

The results of the correlation analysis between the characteristics of hypertensive patients and their quality of life are listed in Table 2.

As seen in Table 2, sex differences do not significantly correlate with the quality of life ($p>0.350$). In other words, both men and women suffering from hypertension have the same opportunities to live a poor or good quality of life. This finding is in line with [8], which suggests that the quality of life of diabetes mellitus patients is not dependent on sex differences ($p= 0.706$). The same case applies to age ($p> 0.418$), which contradicts the results of [9] that indicate age, education, and employment status as the significant determinants of the quality of life of menopausal patients.

TABLE II. THE CORRELATION ANALYSIS BETWEEN PATIENTS' CHARACTERISTICS AND QUALITY OF LIFE

Patient's Characteristics		Quality of Life		p-values	OR (CI 95%)
		Poorn(%)	Goodn(%)		
Sex	Female	14(25.00)	24(42.86)	0.350	0.583 (0.188-1.815)
	Male	9(16.07)	9(16.07)		
Age	<60	6(10.71)	12(21.43)	0.418	0.618 (0.192-1.990)
	≥60	17(30.36)	21(37.50)		
Employment status	Unemployed	16(28.57)	23(41.07)	0.992	0.994 (0.312-3.163)
	Employed	7(12.50)	10(17.86)		
Education	Low	8(14.29)	13(23.21)	0.726	0.821 (0.271-2.480)
	Medium-high	15(26.79)	20(35.71)		
Complications	Yes	11(19.64)	23(41.07)	0.099	0.399 (0.132-1.203)
	No	12(21.43)	10(17.86)		

Table 2 also shows that there is no significant relationship between employment status and quality of life ($p> 0.992$). This finding is in contrast to [9][10][11] that have identified employment status as a factor that strongly affects the quality of life. The education level also has no significant relationship with patients' quality of life ($p>0.726$). Furthermore, whether hypertensive patients have complications or not, it is insignificant to their quality of life ($p>0.099$). It is similar to [12], which shows that the quality of life of older adults with type2 diabetes mellitus does not vary with disease duration ($p= 0.692$) nor complications ($p= 0.545$).

IV. CONCLUSION

There is no significant correlation between patients' characteristics and their quality of life ($p>0.05$).

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