HASIL CEK_Quality of Life of Asthma Patients

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Quality of Life of Asthma Patients in Outpatients Polyclinic At RSKP X Yogyakarta

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Abstract:

Introduction: Asthma is a chronic bronchial tube disease with varying ffequencies associated with increased bronchial tube sensitiveness. Asthma may result in great effect on quality of life in relation to social and psychological aspects, so that one with asthma has worse quality of life than one without chronic disease.

Aim: This study aimed to fínd quality of life based on sex and education of patients with asthma in Outpatients Polyclinic of RSKP X Yogyakarta (further more called RSKP X Yogyakarta).

Methodology: This study was conducted using cross-sectional method prospectively for outpatients from December 2014 to January 2015. Subjects meeting inclusive criteria were 72 patients with asthma, namely, male and female adult patients at > 18 years old, diagnosed by physician for asthma, without illiteracy, and ready to participate in this study. Exclusive criteria are patients with mental disability physical disability, renal failure, tuberculosis, and post infarct myocardial conditions. Data were collected by interviewing patients and asking them to complete questionnaires. Quality of life was measured by using *Short Form-36* (SF-36). Data of quality of life and demography of subjects are presented descriptively.

Results and discussion: Of 72 patients, 40 of them (55.6%) had very good quality of life, while there were no other patients with worse quality of life; patients with good quality of life were 20 (27.8%) patients; and patients with sufficient quality of life were 12 (16.7%) patients. Based on sex whose quality of life is very good; male patients were 22 (30.55%) patients; while female patients were 18 (25%) patients; those with good quality of life were 7 (9.72%) patients of male patients and 13 (198.05%) of female patients; suffícient quality of life of male patients and female patients were equal, namely, 6 (8.33%) patients; and there were no patients with worse quality of life. Based on classification of education, they had significant difference ($p < 0.05$), especially in domain of vitality, mental health, general health, emotional condition, and physical condition. High education group (85.55 ± 1.29) had better vitality than low education group (74.17 ± 1.72), domain of mental health in low education group (85.44 ± 1.14); while high education group was better (90.78 ± 8.86); domain of general health for low education (67.82 ± 1.42); while high education group of general health condition was far better (75.21 ± 1/16); domain of emotional condition in high education (75.92 ± 4.11) could be controlled than low education group (59.26 ± 3.66); and domain of physical condition in low education group (58.33 ± 3.87); while high education group for physical condition was far better (75.69 ±4.03).

Conclusions: Difference of sex did not have significant effect on reduction in quality of life of patients with asthma. In education group, higher education group could control quality of life than low education group, especially in terms of vitality, mental health, general health, emotional condition, and physical condition.

Keywords: asthma, quality of life, QOL *ShortForm-36* (SF-36)

INTRODUCTION

Asthma is non-infectious genetic disease (Depkes, 2008a). Asthma is a bronchial tube

chronic disease found in the whole world with varying frequencies associated with increased bronchial tube sensitiveness so that it stimulates repeated episodes of wheezing, breathlessness, chest tightness, and cough, especially in night and early moming (PDPI, 2006; GINA, 2014).

Based on results of Indonesian-Primary Health Research of 2007, 3.5% of asthma diseases were found in Indonesia (diagnosis by health personnel or symptoms) and prevalence based on diagnosis by the health personnel found 1.9% (Depkes, 2008a). Asthma is vital chronic bronchial tube disease and it is serious problem for public health in various countries in the whole world with varying frequencies from each state and tends to increase in developing countries (Anonym, 2002).

Although asthma seldom results in death, this disease frequently caused problems in both children and adults. Asthma may cause daily activity and emotion disorders (anxious, depressive) (Global Initiative for Asthma, 2002). Asthma may be light and not dismpt daily activity, and it may be persistent and dismpt daily activity (Mangunnegoro H et. al. 2004). One parameter of success in asthma therapy is quality of life. Quality of life is associated with health is subjective experience of patient regarding impact of disease and its manner to administer life satisfaction so that, in generally, quality of life of patient with asthma will be worse than normal subject (Wijnhoven et. al. 2001; Schayck et. al. 1995). This study on quality of life of patient associated with health of patient has been widely conducted for patients with chronic diseases, such as, asthma.

Questionnaires of generic quality of life have been long used to measure parameter of quality of life with various population condition and diseases. Instruments used to measure quality of life of patients with asthma are Asthma Quality of Life Questionnaire (Wijnhoven et. al. 2001; Moy ML et. al. 2001); Short Form 36 - Item Health Survey (Ware et. al. 1992), and Sickness Impact Profile (NHP) (Bergner et. al. 1981).

Various studies showed that degree of asthma affect quality of life in asthma group with low asthma than medium and high degrees (Imelda et. al. 2007). This study aimed to research effect of sex and age of patients in perception for patient quality of life according to SF-36 in patients with asthma.

METHODS

This study was conducted using experimental design with *simple randomization* method and using *before and after with control design*. Patients were classified systematically into two groups, followed during approximately one month observing quality of life of patients with asthma.

This study was conducted for patients attending polyclinic of Pulmonanry Specialty Hospitals X Yogyakarta. During December 2014 to January 2015, 72 patients were collected; they consisted of males and women already diagnosed by asthma physician; their age was >18 years old, their kidney functions were normal, and they were ready to participate in this study. Subjects were excluded from study if they were deaf, renal failure, and post infarct myocardium.

Short Form-36 (SF-36) as one original questionnaire developed by Ware et. al. (1993) is self-evaluation instrument consisting of 36 items of statements providing scoring in 8 domains: physical function, social function, limited role due to emotional problems (emotional role), limited role due to physical problems (physical role), body pain, vitality (spirit), mental health and perception for general health (Brazier et. al. 1992). This survey asked for opinion of patients on their health conditions and information on what they felt associated with their health conditions and how they did their daily activities.

Measurement of health assessment associated with quality of life had been widely conducted and most of the results were relevant to clinical practices. Questionnaires used were expected to attract intention of patients in participating in the study and they did not take long time (Sarac et. al. 2007). Thus, rather short questionnaires must be psychometrically sufficient and indicated that the questionnaires could actually measure what would be measured/assessed (for validity), that the questionnaires could measure using reliability and could detect real changes felt for health status of patients with asthma.

Asthma may result in serious effect on quality of life in terms of limited activities, symptoms, emotions and ecologic exposure. Asthma is one chronic disease, whose quality of life does not include impact of disease and its administration, but also side effect of medicine, psychology (anxiety, depression) and satisfaction for healthcare (Imelda S, Yunus F, Wiyono WH, 2007).

Quality of life is classified into two aspects: aspect of physical health and aspect of

mental health; for more details, see the following questionnaires of *ShortForm-36* (SF-36):

A. Aspect of physical health consists of domain 1 physical functions, limitation due to physical problems (physical role), body pain and public health.

1. Generally, what you will say on your health: (a) extremely good, (b) very good, (c) good, (d) sufficient, (e) worse.

2. Compared to one past year, how do you evaluate your health generally now? (a) far better than one past year, (b) rather better now than one past year, (c) as same as one past year, (d) rather worse now than one past year, (e) far worse now than one past year.

3. Physical function consists of many items. Now, is your health limiting you to many activities? How many? (a) yes, very limited, (b) yes, rather limited, (c) no, not limited at al. The question is: (3a) Heavy to do activities such as running, liflting heavy object, (3b) activities which are not too heavy such as moving tables, (3c) bringing shopping goods of food materials, (3d) riding ladder, (3e) riding one ladder, (3f) kneeing or bending down, (3g) walking more than one km, (3h) walking some blocks, (3i) walking one block, (3j) bathing and dressing alone.

4. Limitation due to physical problems (physical role): Do you have problems with your work (in 4 past weeks)? (a) Yes, (b) No;
4a. To limit total work time, 4b. Poor performance, 4c. limited in doing work or other activities, 4d. Experiencing difficulty to do work or other activities.

5. Magnitude of pain; how much do you feel your body pain? A, No, b, very light, c. little, d. usual, e. oflten, f. very oflten.

6. Does (for 4 recent weeks) pain disrupt your work> How much pain do you feel? A. certainly true, nearly true, c. do not know, d. nearly false, f. certainly true.

7. Public health includes many items. How true or false is each of the following statements for you? a. You are easily sick, b. You are healthy like others, c. Your health is worse, d. Your health is good.

B. Mental health (vitality social fimction, emotional role, mental health):
1. Emotional role: Do you have problem with your work? A. yes, b. no. la. minimizing total work time, lb. poor performance, lc. not working as accurate as usual.

2. Social fimction: (for 4 recent weeks): how is your physical health or emotional problem disrupting your usual social activities? A. never, b. little, c. usual, d. oflten, e. very oflten.

3. Vitality consists of many items. How is your condition for 4 recent weeks? A. always, b. often, c. usual, d. seldom, e. sometimes, f. never.
3a. are you íull of spirit, 3e. do have many energies, 3g. are you tired, 3i. are you surfeited.
Dimensions of mental health include 5 questions: how do you feel during 4 recent weeks? a. always, b. oflten, c. usual, d. seldom, e. sometimes, f. never. 3b. are you anxious. 3c. are you disappointed. 3d. are you peaceftd. 9f. are you depressed. 9h. are you happy.

4. Physical health problems disrupt social time (for 4 recent weeks): a. always, b. oflten, c. usual, d. seldom, e. never. (Sarac et. al. 2007).

Patients meeting inclusive criteria are asked to complete *informed consent*. Information collected includes socio-demographic data and clinical picture. Age of patients is classified into two: < 60 years and > 60 years. Educational level is classified into two groups according to acceptable highest qualification; low education (there are no educations, primary school, junior high school) with education < 9 years, and high educations (senior high school, Dl, D3, Sl, S2) with education > 9 years.

Aflter completing socio-demographic data and clinical picture, then the patients were interviewed and asked to fill *Short Form-36* (SF-36) according to what is felt by patients. Questions asked were 36 items consisting of 8 domains. During interview, patients were kept comfortable in order to be interested in completing questionnaires of *Short Form-36* (SF- 36), aflter interview ended, patients were given reward.

RESULTS AND DISCUSSION

Demographic characteristics of all patients in Table 1 were patients based on sex overall with total 35 male patients and 37 female patients.

While total patients based on age group < 60 years were 65 patients and >60 years were 7 patients. Comparison of sums between low education and high education are same, namely, 36 patients with low education and 36 patients with high education. In terms of smoking status, there were 13 patients who were smokers and 59 patients who were not smokers. 29 respondents had history of family experiencing asthma disease and 43 respondents did not have family history.

Table 1. Demographic Characteristics of patients _____ _____

Characteristics of patients	N (%)
Demography	
Sex	
Males	35 (48.6)
Females	37 (51.4)
Age (year)	
<60	65 (90.3)
>60	7 (9.7)
Education	
Low education	36 (50)
High education	36 (50)
Smoking status	
Yes	29 (40.3)
No	43 (59.7)
Sick period	
<1 year	33 (45.8)
1-5 years	34 (47.2)
6-10 years	

Low education: without school, Primary School, Junior High School.
High education: Senior High School, Dl, DII, DIH, Sl, S2.

Number of patients with asthma could meet quality of life of patients both physically and mentally.

Data of quality of life per domain were compared according to groups of sex and education (low and high educations). Data distributions were tested by *levene test*. The results indicate that data of quality of life per domain were abnormal so that these were continued by non-parametric test of *Mann Whitney*. Values are found significantly different if $P < 0.05$.

Variables of quality of life compared based on groups of age of patients with mean difference test of independent t-test were statistically found different if $P < 0.05$. Mean values of quality of life per domain are consistent with *Short Form- 36* (SF-36) in **Table 2.** Male patients were 72.36 ± 1.38 (general health), 76.74 + 2.21 (physical function), 70.00 ± 4.19 (physical condition), 70.47 ± 4.10 (emotional condition), 76.78 ± 2.52 (social function), 68.28 ± 2.63 (body pain), 84.14 ± 1.34 (vitality), 90.40 ±9.16 for mental health. Female patients were 70.72 ± 1.39 (general health), 68.65 ± 2.67 (physical function), 64.19 ± 3.89 (physical condition), 64.86 ± 3.84 (emotional condition), 74.32 ± 2.52 (social function), 63.11 ± 2.81 (body pain), 75.81 ± 1.76 (vitality), and 85.95 ± 1.12 for mental-general health. While values of quality of life for overall patients were given levels, such as worse, sufficient, good and very good qualities of life. Generally, as presented in **Table 3,** patients with overall quality of life of in very good level were 40 patients (55.6%), whereas others, there were no patients with worse quality of life, patients with good quality of life were 20 patients (27.8%), and patients with sufficient quality of life were 12 patients (16.7%).

Clinical picture of patients: overall, patients diagnosed for asthma were 72 patients.

Table. 2. Quality of life per domain based on sex and education groups

Domain SF 36	Mean ± SD		P	Mean ± SD		P
	Males	Females		Low education	High education	
General health	72,36 ±1,38	70,72 ± 1,39	0,345	67,82 ± 1,42	75,21 ± 1,26	0,029
Physical function	76,74 ±2,21	68,65 ± 2,67	0,222	67,69 ± 2,44	77,47 ± 2,44	0,077
Physical condition	70,00 ±4,19	64,19 ±3,89	0,545	58,33 ± 3,87	75,69 ± 4,03	0,046
Emotional condition	70,47 ±4,10	64,86 ± 3,84	0,440	59,26 ± 3,66	75,92 ±4,11	0,029
Social function	76,78 ± 2,52	74,32 ± 2,52	0,551	68,75 ± 2,86	82,29 ± 1,89	0,061
Body pain	68,28 ± 2,63	63,11 ±2,81	0,435	63,33 ± 2,85	67,92 ± 2,60	0,492
Vitality	84,14 ± 1,34	75,81 ± 1,76	0,058	74,17 ± 1,72	85,55 ± 1,29	0,006[a]
Mental health	90,40 ±9,16	85,95 ±1,12	0,066	85,44 ± 1,14	90,78 ±8,86	0,024

Explanation: p = significance value; (a) = significance value of high education group compared with low education (p < 0.05).

Table 3. General Quality of life of patients with asthma

	Level	F	%
Quality of life	Worse (< 25)	0	0
	Sufficient (25- 49)	12	16,7
	Good (50-74)	20	27,8
	Sangat Very good (75-100)	40	55,6

The results indicate that quality of life of patients based on sex in all domains is not different significantly (p > 0.05). According to study conducted by Sarac et. al. (2007), male patients had better quality of life than female patients but in the study, group of patients with asthma classified based on sex, their quality of life was not different significantly. Moreover, the existence was caused by varying education between groups of sex affecting quality of life. Results of values of quality of life of patients based on groups of education, height of education made by a patient, it could affect quality of life. Especially in domain of vitality showing signifícant difference (p = 0.006), low education (74.17 ± 1.72; while group of high education of vitality (spirit, energy, tiredness and happiness) was far better (85.55 ± 1.29). Mental Condition showed significant increase (p = 0.024) in low education group (85.11 ± 1.14), while high education group of mental health (anxiety, disappointed, silent and peaceful, tired, depressed and sad) in high education (75.92 ± 4.11, could be controlled than low education group (50.26 ± 3.66). Physical condition also showed significant difference (p = 0.029), namely, low education (67.82 ± 1.42 and high education group of general health condition was far better (75.21 ± 1.26), while in emotional condition (anxiety or depression) in high education (75.92 ± 4.11) could be controlled than low education group (59.26 ± 3.66). Physical condition also showed significant difference (p = 0.046) in low education (58.33 ± 3.87); while group of high education of physical condition was far better (75.69 ± 4.03).

It indicates that in high education group (Senior High School, Dl, DII, DIII, Sl, SII) had better quality of life than low education group (without school, Primary School, Junior High School), especially in terms of vitality, mental health, general health, emotional condition, and physical condition. Results of study are consistent with results of study conducted by Wijnhoven et. al. (2001) stating that patients with higher education level had better quality of life than patients with lower education level. Items affecting quality of life of patients are many, such as, lifestyle behavior of patients, compliancy of patients

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