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The Effect of Face to Face Education on Controlling Asthma at Dr. Sosodoro Djatikoesoemo Bojonegoro Hospital

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Abstract. Control of asthma is an essential factor in the long-term treatment of asthma. Knowledge of controlled behavior is an action to be performed for the treatment of asthma patients. This study aims to determine the effect of face to face education intervention based on the Theory of Planned Behavior against asthma control behavior. The quasi-experimental study design, pre and post-test with an equivalent control group. Seventy-four samples were recruited using a purposive sampling technique. The research was conducted by providing a TPB-based face to face education intervention for one month. Data analysis was performed and presented in descriptive statistics, and significant findings were computed using the Wilcoxon signed-rank test. The results showed that face to face education was a positive effect on controlling asthma (p=0,000). A Theory Of Planned Behavior-based education intervention has an impact on enhancing asthma control behavior.

Keywords: Health coaching, health promotion model, adolescent, behavior

INTRODUCTION

The controlled behavior of asthma patients is the key to the long-term success of asthma treatment. Knowledge of controlled behavior is an action to be performed for the treatment of asthma patients. Limited understanding of the behavior of asthma patients makes the disease often unhandled well (1). The number of people living with asthma who died was caused by poor asthma control (2). Control of asthma means to minimize the day and night symptoms of asthma and reduce bronchospasm and minimize the use of short-acting medications against bronchospasm. It also includes the reduction of the risk of life-threatening symptoms and morbidity of asthma over a long period (3). Asthma education is a critical component of successful asthma management. Patient education is one of the pillars of proper asthma management (4). Asthmatic patients should be aware of the positive

attitude towards treatment, which is needed for proper disease management. Asthma may be crucial if the patient is not able to judge the severity of his/her disease or symptoms or does not know the right treatment (5).

Asthma is still one of the health problems in the world. Asthma is among the top 5 causes of death in the world, reaching 17.4%, and the incidence in various countries is 1-18%. In the world, an estimated 300 million people have asthma, and in 2025 it is estimated that the number of asthma patients reaches more than 400 million and recorded in the top 10 causes of death in Indonesia (6-7). The prevalence of asthma in Indonesia, according to the results of the 2013 RISKESDAS, is 4.7%, compared to 2007, an increase of 1%. In the East Java Province itself, the prevalence is quite high, at 5.1% (8).

Management of asthma patient behavior is an essential aspect in the treatment of asthma. It is necessary to take action and shape behavior in asthma patients (9). The prevalence of uncontrolled and still high asthma indicates that asthma management has not been successful Various factors become the cause of this situation, namely the lack of knowledge about asthma, systematics, and implementation of management, prevention and counseling efforts, and management of asthma (10). It shows that asthma behavior problems still stand out, and particular intervention is still needed to correct them. As an effort to increase the success of asthma treatment, it is necessary to have an intervention about managing behavior or overall asthma management, not only overcoming symptoms that arise with drugs alone (11)

Theory of Planned Behavior is a behavior that has the fundamental beliefs approach that creates intentions and encourages individuals to perform certain behaviors, the main factors of the intent of the intentions are attitude, Subjective Norm, perceived behavior control (12). A study about the patient's belief in asthma is a chronic and severe disease that leads to reasonable behavioral control in his asthma treatment (1). Behavior-based on belief will last longer when compared to behaviors based on recommendations (13)

OBJECTIVE

This study aims to examine the effect of face to face education based on the theory of planned behavior on controlling asthma.

METHOD

We conducted the quasi-experimental study design, pre and post-test with the equivalent control group. Sixty-four samples were selected based on the purposive sampling technique in the pulmonary clinic general Hospital Dr. Sosodoro Djatikoesoemo Bojonegoro. The study was conducted by providing a TPB-based face to face education intervention for one month. The patients recruited in this study were adult asthma patients and had primary educational status. The statistical trials used in the research Wilcoxon Signed Rank Test with a significance level of $\alpha < 0.05$.

The research instrument used a sop education based on the theory of planned behavior and asthma control test that was answered by the respondents. The intervention in this study was given the Theory of Planned Behavior-based educational interventions four times through 1 lecture with discussions in the hospital meeting room. Then home visits were conducted three times with a frequency of once a week for 20 minutes of education each meeting. Educational interventions provided include material about what behaviors should be done in asthmatic patients, including techniques for using inhalers, to respond to attacks, lifestyle and environmental modifications, material attitude toward behavior, subjective norm,

and perceived behavior control. The research ethics committee Faculty approved this study of Nursing, Universitas Airlangga Surabaya No.1270.

RESULTS

Characteristics of respondents

Table 1. showed that more than half both the experimental group (56.3%) and control group (56.3%) were male. Both of experimental group (50%) and the control group (50%) were 25 to 60 years old. Most of them graduated from junior high school and suffered asthma when the adult period. Almost all patients in both the experimental group (96.9%) and the control group (96.9%) visit ER twice.

Table 1. Characteristics of respondents

	Group			
	Intervention (n=32)		Control (n=32)	
	N	%	N	%
Gender				
Male	18	56.3	18	56.3
Female	14	43.8	14	43.8
Age				
Teenager 15-25 years	3	9.4	3	9.4
Adult 25-60years	16	50.0	16	50.0
Elderly >60 years	13	40.6	13	40.6
Work				
Yes	18	56.3	14	43.8
No	14	43.8	18	56.3
Education				
Elementary High School	10	31.3	16	50.0
Junior High School	22	68.8	16	50.0
Information about asthma				
Yes	32	100	32	100
No	0	0	0	0
Long Suffering				
When children	7	21.9	7	21.9
When adult	25	78.1	25	78.1
ER visit				
One time	1	3.1	1	3.1
Twice	31	96.9	31	96.9
More than 3	0	0	0	0

Effect of health coaching on the perceived benefit of the action

Based on table 2, Wilcoxon signed-rank test statistic results with a 95% confidence value obtained P-value = 0.000 (<0.05), meaning that there are significant differences between the mean values of control asthma test before and after the Theory of Planned Behavior-based educational intervention. The intervention group had 2.4688 times higher asthma control than the control group increasing intestinal peristalsis 0.0313 times of asthma control

Table 2. Effect on face to face education based on the theory of planned behavior on asthma control in Sosodoro Djatikoesoemo Bojonegoro Hospital

	Asthma Control				*P-value*	*delta*
	Pretest		Post-test			
	Mean	SD	*Mean*	SD		
Intervention Gorup (n=32)	13.68	4.61	16.15	4.38	0.000	2.4688
Control Group (n=32)	18.71	4.52	18.75	4.35	0.854	0.0313

DISCUSSION

Education face to face based on the Theory of Planned Behavior influenced asthma control, so the asthma was controlled. The result showed that increasing mean knowledge after the intervention compared before the intervention in the treatment group. The treatment group experienced an increase in scores after being given face to face education based on the Theory of Planned Behavioral to bring up respectful behavior in the treatment of asthma.

Education face to face education is very influential in improving asthma control (14). Another study about effect education stated that the influence of educational interventions increased the patient's knowledge, control of asthma, and also found that education made emergency unit visits and hospitalizations decrease (15). In applying face to face, education shows a significant effect because there is an underlying belief relationship that occurs a good communication relationship between physician nurses and patients so that specific behaviors obey and produce controlled asthma (16). Education by specialist nurses for patient control is effective in improving asthma control, and being followed up every three months shows an increase in the value of asthma control (17). the study, which depends on an individualized asthma education program, found improvement in the use of relievers for asthma control and a decrease in the number of emergency room visits (18).

Behavior changes or adopt new behaviors through various processes, knowledge (attitudes) - attitudes (attitude) - actions (practice) (19). In the Theory of Reasoned Action said attitudes affect behavior through a careful and reasoned decision-making process whose impact is limited to three things. First, the behavior is not only determined by a general attitude but by a specific attitude towards something. Both behaviors are not only influenced by attitudes but are also influenced by subjective norms, namely, belief. Third, attitudes toward shared behavior with beliefs form an intention to behave in a certain way. Briefly, the practice or behavior according to the Theory of Reasoned Action is influenced by intention.

In contrast, the intention is influenced by attitudes and subjective norms; beliefs influence self-attitudes about the results of past actions. A person will do an act when looking at and believing the action is affirmative and useful for himself and others (20)

Education in improving asthma control can be an essential parameter in the long-term treatment of asthma by not overriding pharmacological treatment because education is also a supportive therapy in improving asthma control and long-term treatment that patients must meet in their treatment targets

CONCLUSION

In conclusion, Theory of planned behavior-based education positively affects patient asthma control. Controlled behavior in asthma patients will be formed if the patient has the intention to do a routine. Intention can be formed from attitudes toward behavior, subjective

norms, and perceptions of control. Limitation of this study is researchers cannot control the behavior of asthma patients directly, especially regarding the use of inhalers, exposure to allergens so that they can influence the patient's clinical condition

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