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Factors Influencing the Practice of Health Behavior in Patients with Chronic Obstructive Pulmonary Disease

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Abstract

Objectives: Chronic obstructive pulmonary disease is the world's third-largest mortality risk. It is a progressive lung disease characterized by continuous airflow restrictions. Acute exacerbation can be experienced, and respiratory failure and cardiovascular complications occur due to poor. Therefore, this study is to identify factors that affect the practice of health behavior in patients with chronic obstructive pulmonary disease

Methods: The subjects of the study were 64 patients who visited the general hospital's respiratory internal medicine department in K area. Differences in disease knowledge, uncertainty, stress, and health practice levels according to general characteristics were analyzed by independent t-rest and ANOVA. Correlation coefficients were used to determine the relationship between disease knowledge, uncertainty, stress, and health practices. Stepwise multiple regression analysis was conducted to understand the explanatory power of the factors affecting the subject's health practice.

Results: The results of this study are as follows. Firstly, in terms of family history, 53.1% of men had a family history, which was significantly higher than 28.1% of women with a family history.($X2=2.51$, $p<.01$). Secondly, among the health information on chronic obstructive pulmonary disease, the average of symptom information was 4.83 points, showing the highest score. Thirdly, unpredictability and distress suggest a statistically significant positive correlation($r=0.577$, $p<.05$). Fourthly, the most significant factor was age 5.9%($R2=0.059$, $p=0.014$) which showed an health practice of 24.8% of patients with chronic obstructive pulmonary disease had explanatory power.

Conclusion: Among these variables, medical intervention is needed to increase health information and reduce uncertainty. Therefore, continuous research is needed for the development and application of standardization programs for research tools. The treatment of chronic obstructive pulmonary disease resulted in high costs of 3.52 points on average and control of 3.70 points.

Key words: Practice, Health behavior, Patients, Chronic obstructive pulmonary disease, Information.

Introduction

Chronic obstructive pulmonary disease is the world's third-largest mortality risk. Lung disease is a disease caused by abnormalities in the airways and alveoli caused by exposure to harmful particles or gases[1],[2]. Chronic obstructive pulmonary disease is a progressive lung disease characterized by continuous airflow restrictions[3],[4]. Chronic obstructive pulmonary disease is a disease that requires attention because the risk is not well known despite the high mortality rate. Smoking can reduce lung function and cause chronic obstructive pulmonary disease[5]. So. smoking cessation is the most effective way to reduce the prevention and progression of chronic obstructive pulmonary disease[6]. Acute exacerbation can be experienced, and respiratory failure and cardiovascular complications occur due to poor gas exchange function in the lungs[7],[8]. Therefore, this study is to identify factors that affect the practice of health behavior in patients with chronic obstructive pulmonary disease

Materials and Methods

Materials

The subjects of the study were 64 patients who visited the general hospital's respiratory internal medicine department in K area. The data were conducted through interviews and surveys from January 23 through February 27, 2023. If the subject was old or difficult to answer, the accompanying guardian was asked to respond.

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Methods

Data analysis calculated real numbers and percentages for general characteristics. Differences in disease knowledge, uncertainty, stress, and health practice levels according to general characteristics were analyzed by independent t-rest and ANOVA.

Correlation coefficients were used to determine the relationship between disease knowledge, uncertainty, stress, and health practices. Stepwise multiple regression analysis was conducted to understand the explanatory power of the factors affecting the subject's health practice.

Results

General Characteristics of Subjects

Table 1 shows the general characteristics of the study subjects. In terms of family history, 53.1% of men had a family history, which was significantly higher than 28.1% of women with a family history. (X^2=2.51, p<.01). In the case of men, smoking was significantly higher than that of women(X^2=3.74, p<.05).

Table 1: General Characteristics of Subjects

Variables	Male	Women	X^2
Stress			
Often	22(68.8)_	13(40.6)	7.48*
Sometimes	10(31.3)	19(59.4)	
Family history			
Yes	17(53.1)	9(28.1)	2.51**
No	15(46.9)	23(71.9)	
Age			
≤49	4(12.5)	13(40.6)	11.26*
50-59	12(37.5)	8(25.0)	
≥ 60	16(50.0)	11(34.4)	
Smoking			
Yes	14(43.8)	9(28.1)	3.74*
No	18(56.3)	23(71.9)	
BMI			
≤22.9	14(43,8)	11(34.4)	9.51
23-24.9	7(21.9)	5(15.6)	
≥25	11(34.4)	16(50.0)	
Total	32(100.0)	32(100.0)	

* p<.05 ** p<.01

Factors Affecting Health Information and Unpredictability

Table 2 presents factors affecting health information and unpredictability. Among the health information on chronic obstructive pulmonary disease, the average of symptom information was 4.83 points, showing the highest score. However, the knowledge of disease causes was the lowest with an average of 1.74 points. Unpredictability was the highest in disease uncertainty with an average of 3.87 points.

Table 2: Factors Affecting Health Information and Unpredictability

Health information	Mean ±S.D.	Unpredictability	Mean±S.D.
Symptom information	4.83±1.28	Question of disease	3.64±0.92
Health care	2,65±0.73	Uncertainty	3,87±0.79
Knowledge of disease causes	1.74±0.48	Disease persistence	3.53±1.46
Precautionary knowledge	3.62±0.75	Recognition of status	2.85±0.73
Comorbidity	1.95± 0.64	Recognition of treatment	1.91±0.68

Factors Affecting Patient Care and Health Practice

Table 3 shows the impact on patient care and health practice. The treatment of chronic obstructive pulmonary disease resulted in high costs of 3.52 points on average and control of 3.70 points. In terms of health practice, the hospital examination item was the highest with 4.91 points.

Table 3: Factors Affecting Patient Care and Health Practice

Distress	Mean ±S.D.	Health practice	Mean±S.D.
High cost	3.52±1.57	Hospital examination	4.91±0.87
Patient control	3.70±0.83	Non-alcoholic drink	3.87±0.42
Incompetence	1.58±0.59	Drug	4.63±1.89
Family pain	3.74±1.62	Food	4.87±1.54
Difficulties in patient care	1.42±0.75	Activity	2.92±0.71

Correlation Related to Health Practice

Table 4 presents correlations related to health practice. Among the health practice on chronic obstructive pulmonary disease, the patient's health information showed a significant negative correlation with predictability($r=-0.275$, $p<.01$). Unpredictability and distress suggest a statistically significant positive correlation($r=0.577$, $p<.05$).

Table 4**:** Correlation Related to Health Practice

Variables	Health Information	Unpredictability	Stress	Health Practice
Health information	1			
Unpredictability	-0.275**	1		
Distress	0.081	0.577*	1	
Health practice	0.249*	-0.264*	-0.085*	

*p<.05 ** p<.01

Influencing Factors of Health Practice

Table 5 shows the factors affecting health practice. Significant variables in this study include general characteristics such as age, family history, stress and smoking status and uncertainty variables. Multiple regression analysis was performed with five variables as independent variables and health practice as dependent variables The most significant factor was age 5.9%($R^2=0.059$, $p=0.014$) which showed an health practice of 24.8% of patients with chronic obstructive pulmonary disease had explanatory power.

Table 5: Influencing Factors of Health Practice

Influence factors	ß	S.E*	ß	R^2	CumR^2	t	p
Age	.168	.062	.375	.059	.061	4.713	.014
Unpredictabli bility	-.129	.047	-2.48	.087	.147	-2.856	.029
Health inf- or- ormation	.494	.173	.269	.055	.173	2.691	.017
Stress	-2.85	.859	-2.62	.061	.262	-3.564	.035
Drug	2.67	.746	.187	.0.47	.248	2.685	.021

Discussion

This study is to identify factors that affect the practice of health behavior in patients with chronic obstructive pulmonary disease. As a result of this study, the average symptom information of the subjects on chronic obstructive pulmonary disease was 4.83 points. This is high compared to an average of 3.79 points in a study of workers with the same measure of information knowledge [9],[10], These results are attributed to the subject's long experience with chronic obstructive pulmonary disease for more than 10 years in this study. Studies have shown that the lower the stress, the higher the health practice, the more chronic obstructive diseases can be treated. Consistent with previous research results, it was found that the more stress, the more restricted the social and psychological adaptation [11],[12].

Age was the strongest predictor as a result of influencing the practice of health habits of patients with chronic obstructive pulmonary disease. Next came unpredictability, health information. Among these variables, medical intervention is needed to increase health information and reduce uncertainty. For this, it is necessary to

continuously monitor health care so that positive health habits can be practice. Therefore, continuous research is needed for the development and application of standardization programs for research tools.

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