Developing University Health Centers' Allergic Rhinitis Management Program for University Students

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Abstract. The purpose of this study was to develop an allergic rhinitis program for university students. In order to develop the allergic rhinitis managing program, we conducted a review of the literature, conducted surveys and physical check-ups and consulted with relevant professionals during the period from May, 2012 to April, 2013. Self-efficacy theory and self-regulation theory were utilized for the theoretical framework which resulted in a 6-session program that consisted of 6 weekly sessions being established.

1 Introduction

1.1 The necessity of this study

Allergies are closely linked to the environment and the occurrence of allergies continues to increase around the world: 20% of the world's population suffers from some form of allergy [1]. Allergies are the first self-reported health problems students experienced in school years [2]. Among allergic diseases, allergic rhinitis occurs most frequently.

Allergic diseases are more likely to spread in physical environments that are shared. Therefore, targeting communal spaces such as schools and work places would maximize the use of existing data and resources. In particular, university health centers could play a crucial role in this initiative as university students spend a lot of time on campuses and university health centers are easily accessed. Therefore, there is a need to develop a program for university health centers focused on prevention and management of allergic rhinitis.
1.2 Purposes of study

This research aims to develop a program for university health centers to help them cope with the rapidly increasing occurrence of allergic rhinitis.

2 Methods

2.1 Research Design

This is a methodological research for developing allergic rhinitis program for university students with allergic rhinitis.

2.2 Research Process

This study was conducted during 1 year (May, 2012 to April, 2013) through stages 1 to 4 in the following manner.

Stage 1. Analyze existing data on university students’ allergic rhinitis and relevant programs

Literature review. Data from web sites related to existing research literature and government information were utilized to gather relevant data for the program.

Results. It is appropriate for the program to be based on the web and at the same time a program that includes both on-line and off-line components should be established. The theoretical framework for existing health-promoting programs is based on self-efficacy theory and self-regulation theory which aim to promote behavioral changes.

Stage 2. Assess severity of university students’ allergic rhinitis, quality of life, management methods and requirements

Subjects. Students who were willing to participate in the research were provided with a description of the purpose and method of this study, before signing a consent agreement to participate in the research. 131 students participated.

Methods. Research on types of allergic rhinitis symptoms, factors that exacerbate and ameliorate allergic rhinitis symptoms, quality of life, prevention and management related requirements was conducted in tandem with an antigen examination.

Analysis. The collected data were analyzed using the SAS 9.3 version to determine frequency, percentage and mean and order for symptom types, allergen type and QOL among university students with allergic rhinitis.

Results. Symptoms were reported in the following order: nasal obstruction, rhinorrhea,
sneezing, and nasal itching respectively. The mean score of QOL of the participants was 2.24 (5 point). The mostly widely occurring antigen is D. Farinae (Positive rate 53.4%) [3].

**Stage 3.** The role of nurses at university health centers and the availability of health-promoting programs and methods

*Subjects.* 50 out of the 180 members of the Korean Association of University Health Center Nurses declined to participate. To achieve an explanatory power of 85% with a medium effect size (d=0.15) at alpha=.05 with respect to multiple regression [4], 102 subjects were needed. So, the number of subjects (106) was proper and appropriate.

*Data Collection.* In November, 2012 an e-mail with a survey attached to it was sent to nurses registered with the Korean Association of University Health Center Nurses.

*Data Analysis.* SPSS win was used to analyze the general and job related characteristics of the subjects.

*Results.* The work of university health centers included the following: disinfection and treatment of wounds, emergency treatments, providing first-aid material during school-wide events. 77.4% of the universities had health promotion programs [5].

**Stage 4.** Create management program for allergic rhinitis by analyzing existing data and needs of the subjects

### 3 Results

A web site (http://health.hoseo.ac.kr/CmsHome/Allergy.eznic) was constructed. Self-efficacy theory and self-regulation theory were utilized for the theoretical framework which resulted in a 6-session program that consisted of 6 weekly sessions being established. The details are described in table 1.

### 4 Conclusions

This program was created based on information gathered from various different sources and utilized the feed-back principle to focus on enhancing self-management abilities. Proactive use of this program in the field is recommended as it is anticipated that the objectives will be achieved with minimal effort.
Table 1. Contents of the program

<table>
<thead>
<tr>
<th>Session</th>
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| 1st     | 1. Self Identification of Current Status  
- Discuss allergic rhinitis symptoms that one has experienced.  
- Learn about the three major allergic diseases, the reason they are increasing, and how the management of symptoms is important.  
- Self diagnose severity of one’s symptoms through survey.  
- Make pledge to improve one's condition.  
- Physical Exercise |
| 2nd     | 2. Understanding Allergic Rhinitis  
- Learn about causes of allergic rhinitis and typical symptoms and compare them with nose colds.  
- Quiz  
- Counseling  
- Physical Exercise |
| 3rd     | 3. Diagnosing Allergic Rhinitis and Treatment  
- Learn about diagnostic methods for allergic rhinitis.  
- Learn various different treatment methods for allergic rhinitis.  
- Quiz  
- Counseling  
- Physical Exercise |
| 4th     | 4. Symptom Management of Allergic Rhinitis  
- Learn about the importance of symptom management with regard to allergic rhinitis.  
- Learn about and practice various management methods.  
- Quiz  
- Counseling  
- Physical Exercise |
| 5th     | 5. Allergic Rhinitis and Daily Life  
- Learn about methods to prevent allergic rhinitis in daily life and practice them.  
- Quiz  
- Counseling  
- Physical Exercise |
| 6th     | 6. Discover how to Change Behavior and Maintain Resolve  
- Evaluate changes implemented since 1st session and become determined to maintain resolve.  
- Quiz  
- Counseling  
- Physical Exercise |

References