A comparative study of two educational methods on anxiety and quality of life in asthmatic patients in Shiraz, southern Iran

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Abstract

Background: Asthma is a life threatening disease which may lead to the death of patient by causing spasm and airway obstruction. Stress is reported to spark off the disease and anxiety is an accelerating factor. This study was performed to evaluate two training methods in reduction of anxiety and improving the quality of life in patients suffering from asthma.

Methods: The present study comprised 84 patients with asthma referred to Shiraz University of Medical Sciences Clinic. They were divided into two groups of 29 subjects for face-to-face and 26 for pamphlete training methods, with 29 individuals considered as controls. In addition to two questionnaires relating to demographic information and quality of life, the present study included Krunbach Alpha, Hamilton anxiety tests and Lickert classification. The total numbers varied from zero to 56 and scores of more than 14 indicated anxiety.

Results: The mean age of cases and controls were 43 and 52 years respectively. Among the participants, 41.8% were males of which 61% held a high school degree or higher with a monthly income of more than 110 $. Of these, 34.6% had a disease duration of more than 10 years.

Conclusion: Both training methods had significant impact on reducing patient’s anxiety and improving their quality of life. However, no relationship was observed between gender, age, education and income levels.

Keywords: Education; Anxiety; Quality of life; Asthma; southern Iran

Introduction

Asthma is a life threatening disease which may lead to death due to spasm and airway obstruction.¹² Data from Japan showed the number of mortality caused by this disease to be about 5,100,000 individuals whereas higher rates were reported from western countries.³ The annual mortality due to asthma reported from USA estimated between 2000 to 5000 during 1978 to 1995.⁴ However, absence from work, inefficiency, loss of creativity, inactivity, and lower quality of life were observed in about 5% of adults suffering from this disease.⁵ Asthma is a common disease with an annual cost of more than one billion dollars, which is markedly reduced by taking appropriate measures at various levels.⁶ Seven, Lawrence (1995) stated that, hospitalization, costs and complications would be reduced, if patients suffering from asthma followed an appropriate training programs.⁸ Although the etiology of the disease is not well known, different factors such as stress could trigger asthmatic attacks. Anxiety is considered not only as an accelerating factor of asthma, but it is also consequent upon the disease.¹⁰¹¹ Dyspnea attacks are severely stressful¹² and...
may flare up airway resistance and recurrence of asthmatic attacks in patients. Various studies showed that, spells of anxiety in asthmatics caused respiratory arrest, disability to react properly during an attack, and finally deteriorating the quality of life. Anxiety in asthma is one of the untoward complications due to certain medications. The anxiety following drug therapy, unawareness about and fear from drug complications would cause an incorrect follow up of treatment and lead to uncontrolled form of the disease, attack recurrence, debility and reduction in quality of life. Therefore, physicians treating asthmatics should pay due attention to the rate of their stress and adopt a policy to reduce patients’ anxiety. Different studies on these patients showed that following training schedules would affect treatment strategy, alleviate signs and symptoms, control anxiety and improve the quality of life. In regard to the importance of training programs for the treatment of patients suffering from asthma, the present investigation was conducted to compare two face to face and pamphlete training methods, in order to determine the more useful, economical and practical approach. Further objective of this study was to evaluate foregoing methods in relation to reducing the anxiety rate and improving the quality of life in such patients.

Materials and Methods

The population under study consisted of all patients referred to Pulmonology Clinic of hospitals affiliated to Shiraz University of Medical Sciences. Patients were randomly divided into two different groups of face to face (n=29) and pamphlete (n=26) training methods with 29 persons considered as control. All patients could read the training pamphlets. Two questionnaires collected demographic data and information about quality of life. They were ranked according to Lickhert classification. The first questionnaire consisted 28 questions on signs, movement limitations, tolerance to environmental stimulus and emotional conditions of the patients. Demographic information were included in the questionnaire. Validity of the questionnaire was confirmed by the specialists and its reliability was confirmed by Krumbach Aplha test with a 95% confidence interval. A second questionnaire included the standardized form of Hamilton anxiety test for evaluation of patients’ emotional status using Lickhart classification of 0 to 4. As a whole, the total numbers varied from 0 to 56, and a score of more than 14, indicated anxiety of the patient. Both questionnaires were completed by interview and pre and post tests were performed on training groups. In order to avoid the training impacts of pretest, at the end of training program, only post tests were conducted for the control group. Quality of life of he patients and anxiety were determined after 2.5 months. The data were analyzed using t test, ANOVA and correlation coefficient test and utilizing SPSS software (10.000, Chicago, IL, USA). A P value<0.05 was considered significant.

Results

The mean age of training and control groups were 43 and 52 years respectively. Among the participants, 41.8% were males of which 61% held a high school degree or higher with a monthly income of more than 110 $. Of these, 34.6% had a disease duration of more than 10 years.

In regard to demographic indices a significant difference was found between training group and control (P<0.001). Both training methods were beneficial in reducing anxiety and improving the quality of life (P<0.01). At the end of training course, 53 (96.3%) of the patients found the programs useful and the reduction in anxiety was evidenced by the mean anxiety score decreasing from 13.50 to 6.50 (P<0.001) upon completion of training course. The pretest mean score of quality of life was changed from 2.41 to 3.86, without any statistically significant difference found between training methods in relation to anxiety reduction and improvement in quality of life. Also, no statistically significant relationship was observed between anxiety and quality of life and the variables of age, gender, education, income level and marital status.

Discussion

Various studies showed that, performance of different training programs would cause increasing awareness, practicality and improvement in quality of life in disabled asthmatic patients. It would increase the daily physical activities, self-care, reduce hospitalization and also, decrease anxiety in these patients. Lic (2001) reported that, performance of face to face and pamphlete training methods by patients and long distance video training would result in quick reduction in anxiety and improvement in quality of life of such
patients. The results of present study showed that, although no statistically significant difference was found between different training programs, both methods could reduce the anxiety and improve the quality of life with post-test scores being statistically different from those of control group. Also, our findings showed a statistically significant correlation between anxiety and quality of life in asthmatic patients (P<0.01), who showed reduced anxiety and improvement in quality of life. Ten reported that asthmatic attacks were stressful and prevented the patients from acting reasonably during the attack, caused increasing disability, deteriorated the quality of life and increased anxiety in patients. Lic (2001) showed that a large number of patients with asthma who were unaware about the effects of inhalatory drugs, exhibited reduced compliance to such medications. Our study, showed that only 11 out of 55 of the patients under training were aware about the effects of the aforementioned drugs. Additionally, about 47 out of 55 of training group felt apprehensive about untoward complications of steroid drugs and only 10 patients used inhalatory drugs according to the prescribed schedule before participation in the training program. A study in Taiwan, showed that, only 17.4% of the control group were aware about correct use of inhalatory drugs. It also demonstrated that, despite improvement in treatment regimen, complications and mortality from asthma was increasing significantly. Other important issues accounting for disability and control of the disease included lack of treatment follow up, inappropriate medication, misconception about asthma, incorrect perception about health and lack of enough training.

Our findings showed the necessity of determining the usefulness of different methods and implementation of appropriate training program for patients suffering from asthma in order to improve their quality of life, promote level of health, alleviate anxiety, reduce complications, cut expenses and decrease mortality.

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References


