

A Comparative Study of the Life Quality and Style of the Healthy and Asthma Suffering People Referring to Zanjan Province Hospitals

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Abstract

Background: Today, asthma is one of the most prevalent chronic respiratory diseases, involving a large number of people and communities. Research show that the disease overshadows the social, psychological and even economic life and performance of the patients.

Objectives: This study was conducted in Zanjan Province hospitals with the purpose of comparing the life style and quality of life asthma patients with healthy people.

Methods: This study is descriptive-comparative in nature, focusing on two groups of individuals (healthy people and those suffering from asthma) using convenience sampling method to serve the goals of the study. The instruments used for collection of data were the World Health Organization Quality of Life (WHOQOL) questionnaire and the Life Style Questionnaire (LSQ). The data were analyzed using the SPSS software version 16.

Results: The demographic data relating to both groups (n=50 for each group) did not show any difference of statistically significant. The mean scores of the life style of the healthy people and the asthma patients were 149.34 and 136.48, respectively (p<0.05). Furthermore, the mean scores of the Quality of Life (QOL) of healthy people and asthmatics were 36.260 and 29.205, respectively (p<0.05).

Conclusion: The life style and QOL of asthma patients are deteriorated to a large extent. Therefore, it is recommended that educational interventions to improve the life style and QOL of patients included in their care plan.

Keywords: *asthma, quality of life, lifestyle, asthma patients*

Introduction

Asthma is a disease characterized by inflammation of the lungs airways, distinguishably the narrowing of the airways and blocking of the airflow and leading to symptoms of suffocation, hard breathing and change in indices of the patient's respiratory test [1]. Asthma is one of the most prevalent chronic diseases around the world [2], leaving drastic impact on the lives and performance of patients and influencing collective activities while reversing even the course of social, psychological

and economic performance of patients. This will afterwards cause other intricacies and problems in the patient [3]. As many as 300 million people in the world seem to have been suffering from the disease [4]. As far as dominance of the disease in Iran is concerned, it is five percent to 15 percent on the average [5]. Besides causing high rate of mortality, the disease affects patients' communication, and different aspects of their life like family dimensions and social activities, while restricting patients' physical activity [6-8].

For the time being no ultimate medication is supposed for asthma; however, appropriate medicinal treatment, better lifestyle, and health-related habits are believed to be the best and the most influential mechanisms proposed to check progress of the disease [9,10]; this way any improvement in the Quality of Life (QOL) criteria will subsequently yield lesser amount of the symptoms of asthma [11]. By 2020, 40 to 50 percent of the lifestyle related non-contagious diseases would account for seven out of 10 death cases in the developing countries [12,13]. Statistics on global rate of mortality, caused by chronic respiratory diseases such as asthma show that asthma stands as the fourth major cause of deaths worldwide [14]. The more attention paid to lifestyle and its improvement would result in avoidance of other health disorders like depression [15]; diabetes [16,17]; obesity; problems with absorption of vitamin D; and heart disease as a result of asthma [18,19].

Depending on the cultural conditions and beliefs of people in each geographic region, diseases can have different effects on patients' QOL and lifestyle. On this basis and because no research has been done on the QOL and lifestyle of the asthma patients in Zanjan Province, this study aims to compare the life style and QOL of asthma patients with healthy people.

Methods

This research is descriptive comparative in nature, carried out on the asthma patients referring to selected hospitals of Zanjan Province from 2017 to 2018. The study was done after receiving the code of ethics from the Ethics Committee of Zanjan University of Medical Sciences (irzums.rec.1397.90) and once the participants signed the form of informed consent. The participants were selected on the convenience sampling method. The healthy people was selected from the patients' companions referred to the lung ward. Since the life style samples outnumbered the QOL samples, the level of significance was decided to be five percent and the test power was set to be 90 percent with respect to the sample size.

The research setting were internal wards of Valiasr Hospital in Zanjan, Army Hospital (554) of Zanjan, Zanjan Social Security Hospital, Al Ghadir Hospital (Abhar) Social Security Hospital

(Abhar), Boali Ali Sina Hospital of Khorramdareh, Razi Hospital of Mahnesan, Amiralmomenin Hospital of Khodabandeh, Shohadaye Tarom Hospital and Isar Ijrud Hospital.

Characteristics of study participants included age range of 40-60 years, confirmation of disease by a physician, lack of psychological problems and substance abuse. The method of convenience sampling continued until having required samples. Meanwhile, the instruments for collection of data included: A questionnaire to obtain demographic information on the respondents' sex, age, educational status, job, income, marital status, medication follow-up status, Smith Miller Lifestyle Questionnaire (LSQ) and an abbreviated 26-item version of the World Health Organization QOL questionnaire (WHOQOL-BREF).

The WHOQOL questionnaire, designed by the World Health Organization (WHO) in 1998 to assess the QOL, consists of 26 questions, including 24 questions to assess the four domains of physical health (7 questions), mental health (6 questions), social relations (3 questions) and environmental health (8 questions) and 2 questions to assess the overall QOL domain. Nejat et al. (2006) validated the scale in Iran context and obtained the alpha coefficient of the questionnaire for healthy population. The alpha coefficient for the physical health domain was 0.70, for mental health was 0.73, for social relations was 0.55 and for environmental communication was 0.84 [20].

The LSQ has a total of 70 questions. The questionnaire consists of 10 factors or components including physical health, exercise and health, weight and nutrition control, disease prevention, psychological health, spiritual health, social health, drug consumption avoidance, narcotic drugs, alcohol, accident prevention and environmental health. This questionnaire is scored on a Likert scale as "Always" (3), "Usually" (2), "Sometimes" (1), and "Never" (0). High scores in each of the components and the total questionnaire indicate a more appropriate lifestyle [21]. The reliability and validity of the questionnaire had previously been estimated by Lali et al. [21]. The SPSS software version 16 was used to analyze the data gained from the questionnaire filled up by the respondents. The means of the QOL and lifestyle variables

pertinent to the two groups under study were compared using the descriptive statistics and t-test.

Results

There were a total of 100 participants, including 61 men and 39 women, in this study. 17% of them were single, 76% were married, 7% were divorced. Out of the population, 62% were urban dwellers and 38% were rural citizens. Economically speaking, 41 percent of the individuals were in poor economic status, 42 percent were in the middle class, and 17 percent had good economic status. As far as their age is

concerned, 26 of the individuals were below 40, 42 fell within the age range of 40 to 60; 32 of the individuals were above 60. As for their educational status, 22 percent of them were illiterate, 36 percent of them were under a diploma, 26 percent held diploma and 36% were college educated. From standpoint of their employment, 11 percent were state employees, 22 percent were freelancers, 16 percent were laborers, 22 percent were housewives and 29 percent were unemployed. Table 1 shows information on the demographic characteristics of the members of study groups.

Table 1: Frequency Distribution of Participants by Group Membership and Demographic Factors

| Demographic Variables | | Asthma Patients N=50 | Healthy People N=50 |
|-----------------------|--------------------|-------------------------|------------------------|
| Gender | Male | 29 | 32 |
| | Female | 21 | 18 |
| Marital Status | Single | 11 | 6 |
| | Married | 36 | 40 |
| | Divorced | 3 | 1 |
| | Widow | - | 3 |
| Address | Urban | 30 | 32 |
| | Rural | 20 | 18 |
| The Economic Status | Low Class | 16 | 25 |
| | Middle Class | 25 | 17 |
| | Top Class | 9 | 8 |
| Age (In Years) | <40 | 20 | 6 |
| | 40 to 59 | 17 | 25 |
| | >=60 | 13 | 19 |
| Educational Status | Illiterate | 8 | 14 |
| | High School | 10 | 16 |
| | Diploma | 13 | 13 |
| | Bachelor and Above | 19 | 7 |
| Job Status | Employee | 8 | 3 |
| | Free | 11 | 11 |
| | Manual Worker | 9 | 7 |
| | Housewives | 11 | 11 |
| | Unemployed | 11 | 18 |

According to Table 2, independent t-test showed a significant difference between the mean scores of the asthmatic-non-asthmatic patients' lifestyle in

terms of physical health, exercise and health, psychological health, social health and environmental health ($P < 0.05$).

Table 2: Independent t-test results for lifestyle variable and its dimensions by study group

| Variable | Group | | | | P Value (T-Test) |
|------------------------------|-------------|--------------------|---------|--------------------|------------------|
| | With Asthma | | Healthy | | |
| | Average | Standard Deviation | Mean | Standard Deviation | |
| Physical Health | 16.02 | 2.27 | 18.28 | 2.50 | 0.005 |
| Exercise and Health | 13.34 | 3.89 | 15.80 | 3.24 | 0.005 |
| Weight Control and Nutrition | 12.32 | 2.89 | 12.60 | 2.74 | 0.621 |
| Disease Prevention | 12.28 | 2.71 | 13.14 | 2.89 | 0.129 |
| Psychological Health | 14.54 | 2.65 | 16.58 | 2.72 | 0.005 |
| Mental Health | 13.66 | 2.20 | 13.92 | 2.16 | 0.554 |
| Social Health | 13.42 | 2.75 | 16.28 | 1.75 | 0.005 |
| Avoid Medicines | 13.38 | 2.52 | 12.72 | 2.37 | 0.181 |
| Accident Prevention | 15.18 | 2.53 | 15.88 | 1.99 | 0.128 |
| Environmental Health | 12.34 | 2.38 | 14.14 | 2.32 | 0.005 |
| Total | 136.48 | | 149.34 | | |

Table 3 shows that general mean and all dimensions of QOL were significantly lower in

asthmatic patients than non-asthmatic patients ($P < 0.05$) based on the independent t-test results.

Table 3: Independent T-Test Results for Quality of Life Variable and It's Dimensions by Study Group

| Variable | Group | | | | P Value (T-Test) |
|----------------------|-------------|--------------------|---------|--------------------|------------------|
| | With Asthma | | Healthy | | |
| | Average | Standard Deviation | Mean | Standard Deviation | |
| Physical Health | 45/34 | 21/86 | 65/42 | 15/01 | 0/005 |
| Mental Health | 48/41 | 14/54 | 59/04 | 14/83 | 0/005 |
| Community Relations | 63/01 | 18/73 | 77/72 | 15/57 | 0/005 |
| Environmental Health | 48/53 | 19/51 | 58/18 | 18/20 | 0/012 |
| Total | 205.29 | | 260.36 | | |

Discussion

The results of this study showed difference between the mean scores of most aspects of lifestyle and QOL in the asthmatic and non-asthmatic patients. A longitudinal study showed that lowering amount of physical activities and a low volume of daily physical activities, as well as a selection of sedentary activities such as watching television and computer games were associated with worsening clinical manifestations of asthma [22]. The results of a study in Taif region of Saudi Arabia showed that the quality of life of children and adults with controlled asthma was higher than those of the patients with uncontrolled asthma [23]. Amira et al. (2017) showed that levels of asthma control in individuals (activities, symptoms, and environment) had significant relationship with the

quality of life of the individuals suffering asthma [11].

These results can be interpreted as asthma causing limitations in one's social activities to the extent that the individuals will have less social presence and activities than others [24]. The asthma patients are proved to have been experiencing emotional disorders, anxiety, hostility, and other psychological factors, which influence their happiness [25]. Many asthmatic patients are also shown to have low level of concentration because of depression, as the low concentration and depression jointly downgrade their quality of life [26]. The quality of life lowered on mediation of the associated mental disorders prompts poor function of the patients' lungs. The low quality of life in turn provokes ever growing severity of illness, frequent hospitalizations, burnout, fatigue,

and readiness to behavioral problems and restricted activities [26].

The condition of quality of life illustrated that the mean score of asthmatic patients was lower than the healthy individuals. Salman Yazdi et al. reported the mean score of the QOL of girls standing at 50.56 and that of boys with asthma at 36.02 [27]. Arash et al. also proved that asthmatic patients in majority of the wards had a relatively favorable QOL (58.3%) [28], the difference between results of this study and those of other studies might be cultural and age differences between the two groups.

Results of the analysis of showed that the lifestyle scores of the healthy individuals were higher and better than the asthmatic patients. Rouhafza et al. studied the Chronic Obstructive Pulmonary Disease (COPD) patients and proved that the lifestyle scores of the COPD patients signed their unhealthy life style [29]. Hassanpour et al. showed that there was significance difference in the scores of the minor and medium phases of the mental disorder domain scores of quality of life in COPD patient. As for the symptoms' domain, there was a significant difference between the total score and the score of the two severe and very severe phases of the domain. Meanwhile, there was no significant difference between the total score and scores of psychological and functional domains of severe and very severe stages of COPD [30]. The reason for the contradictory results of this study and other studies might be related to the difference between the asthma and COPD disease and also cultural or religious and differences.

Isobel Stoodley et al. have described asthma as a complex inflammatory disease that causes considerable exhaustion in the patients. Although drug therapy is the dominant method of asthma treatment, there are ever growing evidences that lifestyle interventions can help asthmatic individuals improve their lives. Better nutrition and regular exercises will have ample benefits for the health of the asthmatic patients; however, lengthy research needs to be made to point to the best composition of diet and exercises. In obese asthma patients, weight loss has outspoken benefits. Other lifestyle interventions such as yoga and breathing exercises may be helpful for adults suffering from asthma. Massage therapy is more promising for children suffering from

asthma. Despite all the findings, more studies should be conducted to select the best intervention. As a whole, lifestyle interventions are inexpensive treatments that can improve the quality of life and other effects of asthma in both adults and children. Lifestyle interventions should be considered as an essential breakthrough for asthma management [31].

This study was quantitative in design. Future studies are suggested to be qualitative or qualitative-quantitative. Furthermore, since the study data is collected from a single Iranian province, therefore, it is suggested to do a study to collect data from individuals in other provinces and draw an inter-city comparison. The results of this study indicated that the mean score of lifestyle in the asthmatic patients was lower in terms of physical health, exercise and health, psychological, social and environmental health and lower in terms of all aspects of the quality of life.

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Conflict of interest

The authors of this article confirm that there is no conflict of interest with regards to present study.

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