ORIGINAL ARTICLE

The Relationship Between Perception of Disease and Quality of Life in Patients with Acne Vulgaris from 2013 to 2014

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ABSTRACT

Background: Acne vulgaris is a common skin disease that can affect people in any ages. The development of acne have adverse effects on life quality. Psychological disorders increased in these patients and their psycho social activities have been affected. Since few studies have been done regarding illness perception in people with acne in Iran, this study aimed to investigate the association of perception of acne disease and quality of life in central of Iran. **Methods:** we analyzed 200 patients Acne Vulgaris referred to Khatam-Al Anbia in 2013-14 by questionnaire of perception of disease (Brief IPQ) and quality of life (DLQL. the data was analyzed using t-test and Chi-square by SPSS-16. **Results:** Mean age of patients was 24.3 years and 158 people (79%) were women and 42 people (21 %) were men. Mean quality life score in women was 8.79±5.3 and in men was 8.69±5.18. Most patients had moderate acne and duration of their disease was between 1 to 5 years. 136 people were 18 to 25 years old and 64 persons were higher than 25 years. The mean perception scores in men and women were 51.83 and 53.26 respectively In this study, there was a relation between sex (P=0.03), Acne severity and duration with quality of life score. **Conclusion:** Women and patients with severe acne and longer duration of symptoms had higher quality life score that had more disorder in life.. There was relation between perception and sex and duration of symptoms.

INTRODUCTION

Acne is the most common disorder that occur not only in 12-24 but also in any age groups. Approximately 85 % of this age groups of teenagers have different grades of acne vulgaris (1). Clinical symptoms are not necessarily inflamed. The common symptoms of follicular are severe kinds of inflamed nodules and pustules. The development of acne in teenagers and also involvement of face, thorax, back and arms have adverse effects on quality of life and also their psycho social activities have been affected. Previous studies have shown increase of depression, social phobia and anxiety disorders and.reduced self-steam Undesirable self-concept causes to decrease in having good feeling and satisfaction of appearance and consequently decrease social communication in person (2, 3). Acne vulgaris is a common and severe condition that affects 91 % of juvenile boys, 79% of juvenile girls and, 3 % of adult men and 12 % of adult women (4). A French study has indicated that in many studied groups, sexuality, – overweight, milk products consumption and physical activity have no effect on acne and it can be improved but by continuous washing (5). Psychological effects of acne are known well, several studies have supported that these effects can cause relapsing the disease (6). Often young people suffer from acne during maximum psychic, social and physical changes. 'Baghestani et al demonstrated that Acne severity has significant effects on quality of life of students of university (54% of students) and women are more affected by adverse effects than men(3). Demireay Z et al evaluated 120 patients with acne by likert standard and Turkish Acne quality of life questionnaire (AQOL) reported that there was no relationship between physician evaluation of acne severity and patients quality of life whereas the association of patients evaluation of acne and quality of life was obvious (5).

The involvement of face is an important aspect of person perception of his/her personality, so psychiatric disorders are not unexpected. Emotional stress can recur Acne and patients with acne are suffered from psychic disorders due to disease effects. The previous studies have shown that acne can be due to, reduce self-steam inter-individual problems, unemployment and increase of anxiety and depression (6). Usually, acne involves the face that its covering is difficult and its scars will remain for long times. About 50 percent of patients explain that they suffer from others opinions about their skin condition. The studies on other chronic diseases show the importance of people's idea about their disease and the ways of compatibility in different conditions (7). The perception of disease is based on information taking from different sources and patient beliefs and can affect person's psychic health and quality of life. Involved persons try to form a cognitive model from disease and to interpret the disease for herself/himself. This perception of disease is important in directing the way of compatibility and special behaviors such as following treatments. Generally cognitive model or perception of disease has fire aspects of patient's beliefs about disease, its reasons, time of disease, therapy or control and its consequences. Some studies have shown that negative attitude relates to more disability in the future, low improvement and more use of medical services regardless of real severity of disease (8-11).

As a result, providing more information about acne, can increase people's tendency to refer to physician for counseling and having better treatment (12). The Other studies also reported the association of acne severity and quality of life too by different standard questionnaires (8, 14). Present study was designed to investigate the association between perception of disease and quality of life in affected patients by acne vulgaris In Yazd city of Iran.

MATERIAL AND METHODS

Research Design and Setting

In a cross-sectional study, 200patients who were referred to Khatam –Al Anbia clinic of Yazd, during 2013 to 2014 were included.

Selection Criteria

Inclusion criteria

All affected people to by acne in face area who are above 18 years old.

Exclusion criteria

People under 18 years old

Data Collection

Lesion severity of samples were evaluated was classified according to standard Global acne Grading system (GAGS) by dermatologist (7). GAGS scoring was made based on six

different areas (forehead, right cheek, left cheek, nose, chin, thorax and back). (No lesion) 1 (1<comedo) 2 (1<popular) 3 (1<pustule) 4 (1< nodule)

Total scores of 1-18, 19-29, 30-38 and 39 placed on following groups: mild, moderate, severe and very severe groups, respectively (7). Then necessary information were collected through standard questionnaire of perception of disease (Brief IPQ) and quality of life (DLQL). According to previous studies quality of life index questionnaire has 10 questions. Questions 1 and 2 are about individual emotions, 3 and 4 are about daily activities 5 and 6 are about leisure time. Question 7 is about work and school, 8 and 9 are about personal communication and 10 is about treatment. Scoring is as following: very high=3, high= 2, low=1 and never= zero. Above index is calculated by scores totaling. The higher score, the higher rate of quality of life damage.

The perception of disease questionnaire has 9 questions. The first one is about disease consequences. The second one is about disease time or duration. The third one is about controlling of disease by person and the forth one is about controlling disease by treatment. The fifth one is about disease background. the sixth, seventh, eighth, and ninth are about concerns for disease, dependence of factors to disease, emotional signs and disease reasons from the view of patients, respectively. The last one can be divided into stress, life style, heredity and etc. It's recommended in final analysis that each one of sub measures to be analyzed separately. Note that the study of disease's reason is not the aim of this research therefore question 9 was removed from questionnaire. For calculating final score, the scores of questions 3, 4 and 7, which have adverse score, are added to scores of questions 1,2,5,6 and 8. The higher score, the lower perception of disease. To retest reliability of the questionnaire for each of the sub-scales of r=0.48 (the ability to understand disease) up to r = 0.70 (Outcomes). To determine the validity scales personal control Self-efficacy questionnaire was used for patients with diabetes (R = 0.61, p<0.01). Bagherian and colleagues have provided Persian version of the scale. Cronbach's alpha of 0.84 and a correlation coefficient of Persian copies 0.71 R- IPQ is the Persian version. Overall mining results Persian version of the scale of assessments represents a good reputation and satisfaction of it (13).

Statistical Analysis

The SPSS© Statistics version 16 (SPSS Inc., Chicago, USA) software is employed for calculation of descriptive statistics, chi- square test. T-test and one - sided variance analysis test for analyzing the statistical data. Diagrams are depicted in MS EXCEL software. For any analyses, P values less than 0.05 were considered statistically significant.

Research ethics

The written informed consent were obtained from all patients. For the patient's privacy the names of patients were remained confidential.

RESULTS

The mean age of patients was 24.3 years and 158 people (79%) were women and 42 people (21%) were men. Mean quality of life score in women was 8.79 ± 5.3 and in men was 8.69 ± 5.18. The quality of life score was 8.77 among participants in this study totally. 46 patients (23%) had under diploma educations, 112 people (56%) were diploma holders and 42 people (21%) had bachelor's degree, mean quality of life scores for them 9.55 ± 5.48, 8.74±5.36 and 7.89± 4.67, respectively. 8 patients had mild severity of disease, 140 patients had moderate severity and 52 patients had severe disease and their quality of life scores is indicated (Table 1). 64 participants had duration of disease less than 1 year while 82 patients between 1 to 5 years and 53 patients up to 5 years with quality of life scores 7.18 ± 4.63, 8.44 ±5.16 and 9.32 ±5.65, respectively. 136 patients were 18 to 25 years old with quality of life score 7.28 ± 3.63. 64 patients were above 25 years old with quality of life score 8.16± 3.16. Mean perception score between women was 53.26 ± 12.26 and between men was 51.83 ±11.57 (Table 2). Mean perception scores between patients with duration of disease under 1 year, 1 to 5 years and above 5 years and also the perception scores among varies age groups has been shown in Table 3 and 4 respectively The correlation of perception score and

Table 1. Quality of life frequency distribution

Severity	Frequency	Quality of life score
Mild	8	4.63-7.33
Middle	140	5.16-8.58
Severe	52	5.65-9.51
Total	200	5.26-8.77

Table 2. The perception of disease frequency distribution

Gender	Frequency	The mean score of perception
Male	42	11.57-51.83
Female	158	12.26-53.26

Table 3. Duration of disease frequency distribution

The onset of illness	Frequency	The mean score of perception
Under 1 year	64	11.63-52.34
1-5	83	11.16-51.97
Over 5 years	53	13.65-50.34
Total	200	12.26-51.49

Table 4. The perception of disease score frequency distribution

Age	Frequency	The mean score of perception
25-18	46	51.58
Over 25 years	112	53.70
Total	200	52.83

quality of life score in affected patients to ance vulgris was 0.4. (P-value= 0.0001).

DISCUSSION

Based on obtained information there was a significant relation between patients quality of life score and gender so that women had higher scores in quality of life suggested a disorder in patients quality of life same results obtained in Baghestani's et al study in Bandar – Abbas also in Bernz's et al study on 479 affected patients to acne and in Cabaler's et al These findings indicated that acne can affect women's psycho- social position more than men (3, 8, 14). Despite studies, there is no significant relation between gender and quality of life in Vaker's et al study on 200 adult affected patients and also in Malon's et al study on 111 affected patients to acne (11, 12).

Based on obtained information in this paper there is no significant relation between education level and quality of life score. On the other hand there is a significant relation between disease and quality of life, so that people who have more severe disease, had higher quality of life scores suggesting quality of life disorder. There is no significant relation between acne severity and quality of life in Matsoka's et al study, but there is a significant relation between lesions severity and patients quality of life in Hong's et al study, in Cobaler's et al study and in Yazirey's et al study (14-17). Patients who have more severity had higher scores in quality of life they have reported more anxiety and depression.

There is a significant relation between disease duration and quality of life score, so that those who had more involvement duration had higher quality of life score in Robi's et al study as well (18). But there is no significant relation between disease duration and quality of life in Matska's et al study and also in Cokandi's et al study on 112 affected patients to acne (15). As a result, being chronic of disease results to increase quality of life and being chronic of disease results to increase quality of life disorder. There is no significant relation between age and quality of life score.

Based on our finding it seems there is a correlation between gender and perception of disease score and also gender and perception of disease score. Therefore women have higher perception score which is caused more disorder in patient's perception. There is a significant relation between disease duration and perception score, so that patients who had short time involvement, had higher perception scores. This shows that they had worse perception and imagination about disease. There was a significant relation between disease severity and perception score, 'which means" so that patients with milder disease had lower perception score and had better conceptions about disease. But gradually the more disease severity the higher perception score were obtained, so that patient's conception about disease reasons and treatment had been worse.

CONCLUSION

Based on findings of this study, there was a significant relation between perception score and quality of life score.

Therefore patients with higher quality of life score had higher perception scores. So the lower quality of life, the most negative perception and conception about disease obtained. And also patients with age above 25 years had higher perception scores and their conceptions about disease was worse. Further study should be obtained to investigate the reasons behind the negative perception of acne disease and the quality life of patient, also some studies need to be designed to evaluate the efficacy of psychological treatment on perception of disease.

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AUTHORS CONTRIBUTION

All the authors contributed in this study equally.

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