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Hirsutism and Health Related Quality of Life

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Abstract

Background: Quality of life (QoL) is an emerging general parameter of patients' wellbeing. It is a multifactorial concept consisting of individual perception of physical, psychological and social functioning. Hirsutism is a common disorder of excess growth of hair in an androgen-dependent male distribution in women. Hirsutism in women results in significant psychological and social problems. It impacts negatively upon the QoL of women and is the cause of stress, anxiety and depression.

Aim of the study: To investigate the effect of hirsutism on QoL of hirsute women.

Patients and methods: One hundred female patients with hirsutism over the age of eighteen years were enrolled in this study. Each woman was asked to fill a self-report questionnaire.

Results: The results of this study showed that not only the QoL, but also the self-related health status are seriously affected by the level of hirsutism in women. The higher the level of hirsutism, the worse the QoL, measured by DLQI. Hirsutism has a great negative impact on QoL in women and causes psycho-logical problems. Psychological or psychiatric treatment has been suggested for this group of patients. However, according to our results the outcome of QoL, anxiety and depression level is significantly associated with the level of hairiness. So it is more appropriate to offer effective medical treatment for hirsutism than to just offer psychotherapy and refer the women back to self-treatment.

Conclusion: We can conclude that hirsutism has a great negative impact on QoL in women as QoL, anxiety and depression level is significantly associated with the level of hairiness. Although hirsutism is not a serious or life threatening disease, it produces social, psychological and emotional disability, it is more appropriate to offer effective medical treatment for hirsutism plus psychotherapy.

Keywords: Hirsutism; Psychotherapy; Androgens; Physician

Introduction

Hirsutism is excessive growth of terminal hair in women in skin areas sensitive to androgens. It is a sign of increased androgen activities in the hair follicles, either as a result of increased circulating level of androgens or increased sensitivity of the hair follicles to normal circulating level of androgens [1]. The areas' most affected are the face and the lower abdomen [2].

Hirsutism is an international issue and approximately 5% to 15% of women have reported to be hirsute [3]. Excess hair is cosmetically concerning for women and can significantly affect self-esteem. Mediterranean women generally have a medium amount of body and facial hair, whereas Asian women have a minimal amount [4].

The concept health is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or illness" [5].

The definition of Quality of Life (QoL) proposed by the World Health Organization is "the individuals' perceptions of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns [6,7].

At the beginning of the new Millennium, Smith [8] concluded in his review of the literature that "QoL is currently underpinning a significant proportion of new social science research".

QoL is the product of the interplay among social, health, economic and environmental conditions, which affect human and social development [9].

Moreover, QoL provides a global evaluation of one's life that can be used to determine the subjective experience of living with a condition, affect planning for the future, and potentially affect acceptance and adherence to treatment. However, every disease has some explicit and implicit effects on the life of the patient; use of medicines may cure the patient from infection but seems to be ineffective to reduce the physical, psychological and mental distortions which he or she faces during infection time period [10].

QoL broadens the definition of health outcomes beyond the traditional clinical endpoint to represents the implication of disease and treatment in terms of what people are able to do and how they feel. QoL assumed to be used to evaluate issues unrelated to the context of health care that usually includes subjective evaluations of both positive and negative aspects of life [11]. In the medical context, QoL is often defined in terms of functional status [12]. Within the public health context, the term corresponds with the WHO definition of health; which is defined as a state of complete physical, mental, and social well-being not a mere absence of disease or infirmity [13].

Researchers have shown that excessive growth of hair in women was the second most serious rated factor after infertility that negatively influenced their QoL, and that these women had higher depression scores and greater body dissatisfaction. Women with excessive hair growth experience it as a theft of womanhood and talk about themselves in masculine terms, such as having male hair or a full beard [14].

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Health Related QoL is influenced not only by the disease itself but also by socio-demographic, psychological, lifestyle, biomedical factors and gender. Low socio-economic status, immigrant status, single statuses are all related to poorer QoL [15].

The impact of hirsutism symptoms on a woman's QoL may be profound and can result in psychological distress that threatens her feminine identity. The condition may therefore result in altered self-perception, a dysfunctional family dynamic, and problems at work. Many aspects of the disorder can very conceivably cause a significant amount of emotional stress [16].

Also, patients with hirsutism displayed significantly higher social fears than controls. They also showed more anxiety and psychotic symptoms, whereas there were no significant differences in depression, somatization, anger-hostility and cognitive symptoms [17].

Excessive hair growth in women with Polycystic Ovary Syndrome (PCOS) was the second most seriously rated factor that negatively influenced their QoL [1]. The changes that occur in women's physical appearance as a result of PCOS, (such as obesity, acne and hirsutism), might contribute to psychological morbidity and a feeling of being stigmatized [18].

Aim of the Work

The aim of this work is to investigate the effect of hirsutism on Health Related Quality of Life (HRQoL) of hirsute women attending the Dermatology Clinic, Al Hussein Hospital for problem of excessive hair growth.

Patients and methods

Both qualitative and quantitative methods have been used to investigate the impact of hirsutism on the quality of life of the patient.

Study design: A case control study was used to investigate the current research problem.

Patients and controls

A convenience sample method was used. The studied group consisted of 100 female patients and another 100 females as a control group. The patients attending Dermatology Clinic at Al Hussein University Hospital with hirsutism were recruited in this study. The two groups were matched in age (over 18 to 40 years) and socioeconomic status. The controls were free from hirsutism. Also, they were from females attending other clinics or neighbors.

Inclusion criteria

Hirsute females aged from 16 to 40 years. Ferriman and Gallway [19] [F-G] score was used as a visual method of determining the severity of hirsutism in nine androgenic sensitive skin areas (upper lip, chin, chest, upper back, lower back, upper abdomen, lower abdomen, arm and thigh). Each area has 0 to 4 score and F-G score is summation of all 9 area scores. Those patients with F-G score ≥ 8 or one area score=4 were eligible cases and included in the study. In the next step, the F-G score was categorized based on the following thresholds: F-G score <8 with one area score=4 were considered as one-area limited hirsutism, 8-10=mild, 11-14=moderate and scores >15 were considered as severe hirsutism.

Exclusion criteria

Patients with chronic or debilitating diseases like cardiovascular, thyroid and psychological diseases.

Data collection

1. Patients were asked to complete a form including questions about age, marriage, duration of hirsutism (in study group), method of removing unwanted hair and medical problems diagnosed by their physician before, and to complete a socioeconomic questionnaire calculating their social standard. Social scores to calculate social standards were according to Fahmy and El-Sherbeny [20]; the total score summed 28; high social standards=25-30, middle social standards=20-24, low social standards=15-19, and very low social standards ≤ 15.

2. Also, QoL was assessed by a self-administrated Dermatology Life Quality Index and Hospital Anxiety and Depression score questioners.

Hospital Anxiety and Depression Scale (HADS): The HADS is a self-administered measure used to screen for the presence of depression and anxiety. The HADS was developed to provide clinicians with an acceptable, reliable, valid and easy to use practical tool for identifying and quantifying depression and anxiety. The HADS can be used in a variety of settings (e.g., community, primary care, in-hospital, and psychiatry). The HADS is not intended as a complete diagnostic tool, but as a means for identifying general hospital patients who need further psychiatric evaluation and assistance [21]. A score system for questions 2, 4, 6, 8, 11, 12, 14 was used for anxiety, while a score system for questions 1, 3, 5, 7, 9, 10, 13 was used for depression. A grading of 0-7=non-case, 8-10=borderline case, and >11=case [22].

Dermatology Life Quality Index (DLQI): DLQI is the first dermatology specific instrument and it was developed by Finlay and Khan [23]. The aim of this questionnaire was to measure how much your skin problem has affected your life over the last week. The DLQI is calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0. The higher the score, the more quality of life is impaired [24]. The scoring of each question was as follows; very much scored 3, a lot scored 2, a little scored 1, not at all scored 0, and question 7 (prevented work or studying) scored 3. Interpretation of the meaning of DLQI scores; 0-1=no effect at all on patient's life, 2-5=small effect on patient's life, 6-10=moderate effect on patient's life, 11-20=very large effect on patient's life, and 21-30=extremely large effect on patient's life [25].

Ethical considerations

An approval to conduct this study was obtained. Also, all the female cases and controls were gave a verbal consent before sharing in the study. The consent informs females that all the filled information will be confidential.

Statistical design and data analysis

Data were coded manually and analysis was conducted through SPSS program, version 16. The results were presented in tables and Figures. Descriptive and analytical statistical analysis was done: Quantitative data; mean ± Standard Deviation (SD) was used as they measure central tendency and dispersion of quantitative data. Qualitative data: number and percentage were used. Chi square (χ^2) test was used for comparison of qualitative data, student's t-test for quantitative data of two independent samples. Analysis of Variance (ANOA) was used for comparison of quantitative data of more than two groups. Linear regression analysis was carried out to assess some factors may affect HADS Scale. Correlation was done between two scales mention. The level of significance was taken at $P<0.05$.

Results

Figure 1 shows that among case about two thirds (63.0%) of females had moderate hirsutism and about one third (29.0%) had mild hirsutism.

Table 1 illustrates assessment of HADS among studied groups. It was found that the mean of total score of HADS (20.1 ± 3.1) and that of each domain (12.1 ± 2.3 and 7.9 ± 1.2) (anxiety and depression, respectively) were higher among cases; the comparable figures in controls were (4.2 ± 1.9 and 6.8 ± 1). These differences were statistically significant (p<0.05). Also, it was found that the mean of total score of QoL was higher in cases (17.4 ± 2.3) than in controls (3 ± 1.2). This difference was statistically significant (p<0.05).

Figure 2 show that hirsutism had very large effect on quality of life (91.0%) in cases regarding the QoL score, while 93.0% of controls had no effect.

Table 2 illustrates HADS among studied groups according to marital status. It was found that the mean of total score of HADS and that of each domain (anxiety and depression) score were higher among married and single females of cases than those of controls. These differences were statistically significant (p<0.05). Also, the table illustrates DLQI among studied groups according to marital status. It was found that the mean of total score of DLQI score was higher among married and single females of cases than those of controls. These difference was statistically significant (p<0.05).

Table 3 illustrates Hospital Anxiety and Depression Scale among studied groups according to occupation. It was found that the mean of total score of HADS and that of each domain (anxiety and depression) score were higher among house wives and worked females of cases than those of controls. These differences were statistically significant (p<0.05). Also, the table illustrates DLQI among studied groups according to occupation. It was found that the mean of total score of DLQI score was higher among house wives and worked females of cases than those of controls. This difference was statistically significant (p<0.05).

Table 4 illustrates HADS among studied groups according to social class. It was found that the mean of total score of HADS and that of each domain (anxiety and depression) score were higher among different social class females of cases than those of controls. These differences were statistically significant (p<0.05). Also, the table illustrates DLQI among studied groups according to social class. It was found that the mean of total score of DLQI score was higher among different social class of cases than those of controls. These differences were statistically significant (p<0.05).

In Table 5, it was found that the highest mean of total score of HADS and that of each domain (anxiety and depression) score were recorded among females with severe hirsutism, while the lowest mean of anxiety and total HADS were recorded among those with moderate hirsutism, however the lowest mean of depression score were recorded among females with mild hirsutism. These differences were statistically insignificant (p>0.05). Also, it was found that the highest mean of total score of DLQI score was recorded among females with severe hirsutism, while the lowest mean was recorded among females with mild hirsutism. These differences were statistically significant (p<0.05).

In Table 6, it was found that the lowest means of total score of HADS and that of each domain (anxiety and depression) were recorded among females who had university education, while highest means were recorded among females who had preparatory education. These differences were statistically significant (p<0.05). Also, it was found that the highest mean of DLQI was among females who had university education, while the lowest mean was among females who had primary education. This difference was statistically insignificant.

In Table 7, it was shown that most effective factors that significantly affect DLQI were age of patients, occupation and grade of hirsutism (P<0.05) all were positively affect DLQI.(if age of female increase, or if she was house wife and if she had severe grade of hirsutism then DLQI will impaired). Also, it was shown that most effective factor that significantly affect HADS social class of patients (P<0.05) as it positively affect HADS (if social class of female is decrease then HADS will impaired).

Table 8 show that daily activity of females with hirsutism had the highest mean among DLQI sections (4 ± 0.8), while work and school activity had the lowest mean (1.4 ± 0.6) among them. This difference was statistically significant (p<0.05).

Discussion

In medical practice, it is often impossible to separate the disease from the individual's personal and social context, especially in chronic and progressive diseases [26]. Also, it is known that patients with chronic diseases place a high value on their mental and social well-being as well as pure physical health [27]. Focusing on HRQoL as a national health standard can bridge boundaries between disciplines and between social, mental, and medical services [28].

Hirsutism is a common disorder of excess growth of terminal hair in an androgen-dependent male distribution in women, including the chin, upper lip, breasts, upper back, and abdomen. It affects 5% to 10% of women of reproductive age. Hirsutism is more than a cosmetic problem. It may be linked to significant underlying diseases, often associated with a decreased quality of life, impaired self-image of the patient feminine identity [29].

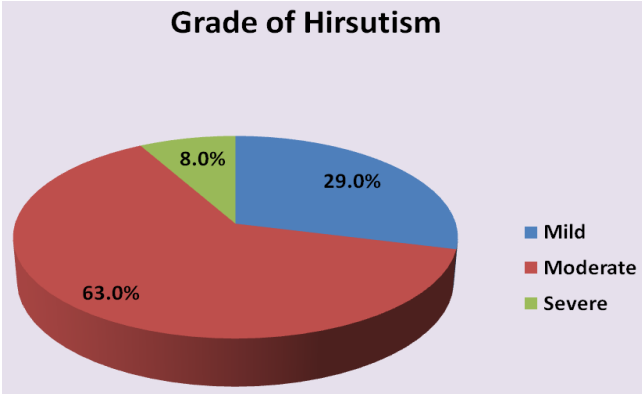

Figure 1: Frequency of cases in classification of Hirsutism severity based on Ferriman and Gallway (1961).

Variables	Cases No=100	Controls No=100	t-test	P value
HADS				
Anxiety scale (Mean ± SD)	12.1 ± 2.3	4.2 ± 1.9	t=27	p<0.05
Depression scale (Mean ± SD)	7.9 ± 1.2	6.8 ± 1	t=7.4	p<0.05
Total scale (Mean ± SD)	20.1 ± 3.1	11 ± 2.3	t=24	p<0.05
DLQI				
Total score (Mean ± SD)	17.4 ± 2.3	3 ± 1.2	t=58	p<0.05

Table 1: Mean ± SD of Hospital Anxiety and Depression Scale (HADS) and Dermatology Life Quality Index (DLQI) among the studied groups.

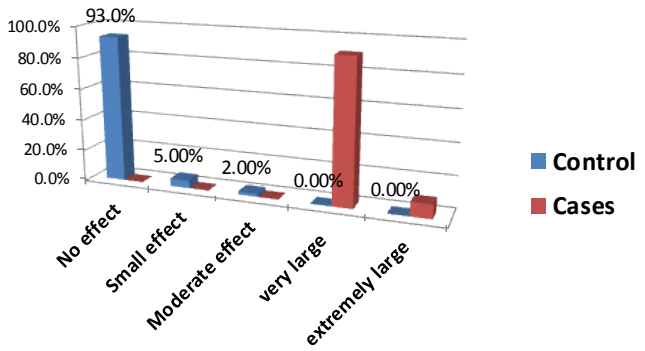

Figure 2: Frequency in meaning of dermatology life quality index (DLQI) scores among studied groups.

Variables	Marital status		ANOVA	P value
	Married	Single		
HADS				
Anxiety scale (Mean ± SD) Case Control	 12.2 ± 2.1 4.1 ± 1.8	 12 ± 2.7 4.5 ± 2	F=37	p<0.05
Depression scale (Mean ± SD) Case Control	 7.9 ± 1.3 6.8 ± 2	 8 ± 1 6.7 ± 1.1	F=54	p<0.05
Total scale (Mean ± SD) Case Control	 20.1 ± 3 10.9 ± 2.3	 20 ± 3.3 11.2 ± 2.1	F=56	p<0.05
DLQI				
Total score (Mean ± SD) Case Control	 17.7 ± 2.2 1.1 ± 0.3	 16.7 ± 2.2 1.1 ± 0.2	F=46	p<0.05

Table 2: Mean ± SD of Hospital Anxiety and Depression Scale (HADS) and Dermatology Life Quality Index (DLQI) among studied groups according to marital status.

Variables	Occupation		ANOVA	p-value
	Work	House wife		
HADS				
Anxiety scale (Mean ± SD) Case Control	 11.7 ± 2.1 4.3 ± 2	 12.5 ± 2.3 4 ± 1.7	F=77	p<0.05
Depression scale (Mean ± SD) Case Control	 7.8 ± 1.2 6.8 ± 1	 8 ± 1.2 6.8 ± 1	F=57	p<0.05
Total scale (Mean ± SD) Case Control	 20.1 ± 3 10.9 ± 2.3	 20.5 ± 3.1 10.8 ± 2.3	F=56	p<0.05
DLQI				
Total score (Mean ± SD) Case Control	 17 ± 2 1 ± 0.2	 17.7 ± 2.4 1.2 ± 0.3	F=46	p<0.05

Table 3: Mean ± SD of Hospital Anxiety and Depression Scale (HADS) and Dermatology Life Quality Index (DLQI) among studied groups according to occupation.

Hirsutism has a great impact on the patient's quality of life. The knowledge of the effect of a dermatologic problem on the patient's quality of life is of great importance in the management of that condition and can even change the therapeutic approach. Useful methods to evaluate this impact are the DLQI and HADS [30].

The aim of this study was to evaluate the effects of hirsutism and quality of life, anxiety and depression in hirsute women.

One hundred female patients with hirsutism over the age of sixteen years were enrolled in this study. Each woman was asked to fill the self-administered questionnaire including sociodemographic questions (age, employment, education, income, etc.), DLQI, HADS, and Ferriman-Gallwey scale (F-G scale).

QoL is defined as "an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns [31].

In the present study, the items most affected measured by the DLQI were embarrassment/self-consciousness (item 2), influence on clothing (item 4), affected social or leisure activities (item 5) and problems with partner/close friends/relatives (item 8). The area less affected was work and school. It is noted that the patients with severe level of hirsutism had higher scores on all items more than the patients with mild level (not present data).

These results further strengthen what has been found by Ekback et al. [32], where women were working, but did not participate in activities with work mates outside their work, in case they risked revealing their hairiness because of the embarrassment and guilt they felt over their situation. Because hair removal can be time-consuming, expensive, and frustrating, many hirsute women feel unable to manage their hair removal effectively, and some experience depression to a similar or greater degree than women with breast cancer or psoriasis. This is also in line with the higher levels of 'social fears' that reported among women with hirsutism compared to women without hirsutism [33].

Soliman and Wardle reported that some hirsute women become reclusive and only venture out after dark, while in young people hirsutism can be a cause of bullying, social isolation, and poor educational performance. These problems of low self-esteem and self-consciousness may have an impact on their ability to work because there is evidence to suggest that there are fewer hirsute women in employment than non-hirsute women despite having similar educational experiences and levels of attainment.

Maziar et al. [34] revealed that HRQoL in PCOS patients showed excessive facial hair was significantly impacted and there was improvement in QoL after laser treatment of unwanted facial hair.

Many factors can explain this result. Hirsutism commonly affects young people at a time when they are undergoing maximum psychological, social and physical changes and they are least capable of coping with additional stress. In addition the highly visibility of the disease severely impact QoL. As the social norm of femininity today include hair free body [35].

Variables	Social class			ANOVA	P value
	High	Middle	Low		
HADS					
Anxiety scale (Mean ± SD) Case Control	11.8 ± 2.3 4.2 ± 2.1	12.7 ± 2.2 4 ± 1.3	13.4 ± 1.6 4.4 ± 2.3	F=79	p<0.05
Depression scale (Mean ± SD) Case Control	7.7 ± 1.2 6.7 ± 1	8.1 ± 1 6.9 ± 1	8.8 ± 1 6.6 ± 0.9	F=55	p<0.05
Total scale (Mean ± SD) Case Control	19.5 ± 3 10.9 ± 2.5	20.7 ± 3 10.9 ± 1.7	22.2 ± 2.4 11 ± 3	F=53	p<0.05
DLQI					
Total score (Mean ± SD) Case Control	17.5 ± 2.5 1.2 ± 0.4	17.2 ± 2 0.4 ± 0.06	17.3 ± 1.4 0.3 ± 0.01	F=49	p<0.05

Table 4: Mean ± SD of Hospital Anxiety and Depression Scale (HADS) and Dermatology Life Quality Index (DLQI) among studied groups according to social class.

Variables	Disease severity			ANOVA	P value
	Mild	Moderate	Severe		
HADS					
Anxiety scale (Mean ± SD)	12.5 ± 2.3	11.8 ± 2.1	13.1 ± 3.7	F=1.3	p>0.05
Depression scale (Mean ± SD)	7.7 ± 1.2	7.9 ± 1.1	8.8 ± 1.7	F=2	p>0.05
Total scale (Mean ± SD)	20.1 ± 3.1	19.7 ± 2.9	21.9 ± 4.1	F=1.5	p>0.05
DLQI					
Total score (Mean ± SD)	17.0 ± 2.7	17.2 ± 1.6	20.5 ± 3.1	F=9.8	p<0.05

Table 5: Mean ± SD of Hospital Anxiety and Depression Scales (HADS) and Dermatology Life Quality Index (DLQI) among cases according to severity of hirsutism.

Variables	Education				ANOVA	P value
	Primary	Preparatory	Secondary	University		
HADS						
Anxiety scale (Mean ± SD)	13.4 ± 3.5	13.5 ± 1.8	13 ± 2.5	11.5 ± 2	F=3.8	p<0.05
Depression scale (Mean ± SD)	7.6 ± 0.7	8.5 ± 1.2	8.4 ± 1.1	7.5 ± 1.2	F=3.7	p<0.05
Total scale (Mean ± SD)	21 ± 4	22 ± 3	21.3 ± 3	19.2 ± 2.7	F=4.8	p<0.05
DLQI						
Total score (Mean ± SD)	17.0 ± 1.4	17.2 ± 1.2	17.3 ± 2.4	17.5 ± 2.3	F=0.8	P >0.05

Table 6: Mean ± SD of Hospital Anxiety and Depression Scale (HADS) and Dermatology Life Quality Index (DLQI) among cases according to level of education.

Factors	B	P value
DLQI		
Increase age of patients	0.3	0.009
Marital status	0.0	0.9
Occupation (house wife)	0.3	0.009
Educational level	0.1	0.1
Social classes	-0.09	0.3
Severe grade of hirsutism	0.3	0.009
HADS		
Age of patients	0.03	0.7
Marital status	0.07	0.6
Occupation	0.1	0.3
Educational level	-0.02	0.8
Low social classes	0.3	0.02
Grade of hirsutism	0.05	0.6

Table 7: Linear regression analysis for assessment of some factors may affect Dermatology Life Quality Index (DLQI) Scale and Hospital Anxiety and Depression Scale (HADS).

Sections of DLQI	Mean ± SD	*ANOVA*
Symptoms and feelings	2.4 ± 0.5	
Daily activities	4 ± 0.8	
Leisure	3.2 ± 0.5	
Work and school	1.4 ± 0.6	F=44
Personal relationships	3.7 ± 1.1	
Treatment	2.4 ± 0.3	p value=0.00

Table 8: Dermatology Life Quality Index (DLQI) section scores in women with hirsutism.

In the present study, the mean value for DLQI was high (DLQI=12.6) which is similar to what has been found by Berg and Lindberg [35], in previous study evaluating quality of life in women with hirsutism and in parity with other severe forms of skin diseases, for example psoriasis or atopic dermatitis.

In the present study, women with severe levels of hirsutism (F-G ≥ 15) scored significantly higher both on item and dimension levels of DLQI compared to women with mild (F-G=8-10) levels of hirsutism indicating that there was a highly significant association between the clinical severity and QoL in hirsute patients.

The findings of present study were in concordance with Zhuang et al. [36], who revealed that there was a significant correlation between the clinical severity of hirsutism and DLQI index. The more severe degree of disease, the greater the impact on the DLQI scores. To a certain extent, these results revealed that the clinical severity of hirsutism affect the QoL of patients. Also our findings are in concordance with Reid et al. [37], who said that the more severe form of disease, the more bothered the patient QoL.

Drosdzol et al. [38], in their study on hirsutism found a negative effect of hirsutism on QoL in these patients. A study by Basra et al. [39], considered not only the quality of life of hirsute women in comparison to non-hirsute women, but also the impact on the partners of hirsute women. The study found that a statistically significant difference exists between hirsute and non-hirsute women in relation to health related quality of life. On a scale between 0 (dead) and 100 (perfect health) the mean score for hirsute women was 68.4 while for non-hirsute women it was 87.7. The mean score of the partners of hirsute women was 75.4 indicating that their quality of life was likely to be somewhat affected by the hirsutism of their partner.

The effect of laser treatment was investigated in 45 women with facial hirsutism. A modified DLQI before and one to two months, two to four months and six months after laser treatment in fifteen out of 45 women. The mean DLQI score before treatment was 12.8. The mean DLQI score at one to two months was 7.0, at two to four months it was 9.2 and at four to six months it was 11.5. There was a major improvement in DLQI score at 1-2 months but longer-term benefit was not observed when the hair growth has returned back to pre-treatment levels. In spite of that 70% of the women reported a high level of patient satisfaction and nearly 80% was willing to have further treatment [40].

In the present study a large proportion of the women reported anxiety and depression on the HADS. The levels of anxiety and depression were higher among women with severe F-G score than mild F-G score.

Lipton et al. [41] reported that nearly three-quarters of hirsute women had anxiety, one-third had clinical levels of depression and one-third felt uncomfortable in social situations and tried to prevent others from coming near them.

A study by Clayton et al. [42], suggested that the levels of anxiety and depression of hirsute women were higher than those of women attending outpatient departments with newly diagnosed gynecological or breast cancer.

Hirsutism has a significant negative impact on psychosocial development. It can have serious psychological consequences and undermines a woman's confidence and self-esteem [3].

Our result is in line with results reported by Keegan et al. [18], who said that hirsutism is possibly linked with problems concerning female identity and sexual self-worth; it has a significant negative impact on psychosocial development. It can have serious psychological consequences and undermines a woman's confidence and self-esteem.

However, Hahn et al. [43], found in their study no association between these problems and hirsutism but they found that hirsutism can lead to feelings of decreased sexual self-worth and sexual satisfaction. This difference due to low number of patients (20) and the reason for the disparity between the two studies could lie in ethnical and cultural differences of the two populations studied.

The range of the F-G score in our study was 8-29. However, the mean score was high (12.6) and there were also significant differences in quality of life, anxiety, depression and perceived health status between women with severe (F-G ≥ 15) and mild (F-G=8-10) hirsutism, which further point to the fact that the level of hirsutism was the most important factor for women's quality of life.

Hirsutism has a great negative impact on HRQoL in women and causes psychological problems. Psychological or psychiatric treatment has been suggested for this group of patients. However, according to the outcome of HRQoL, anxiety and depression level is significantly correlated with the level of hairiness. So, it is more appropriate to offer effective medical treatment for hirsutism than to just offer psychotherapy and refer the women back to self-treatment. Patients with a suspected distress disorder or signs of severe depression should of course also be referred for psychiatric evaluation [38,44].

Overall, dermatologists should be alert to the following potentially significant factors: sufficient time should be spent on consultation and at the first visit; patients should take a few minutes to complete a simple questionnaire regarding their motivation and expectations of the treatment in order to promote communication between the doctor and patient. Clinicians should answer any questions the patient may have to ease their concerns regarding hirsutism and to correct any impractical expectations, particularly regarding the improvement of disease and time taken for treatment [36].

Conclusion

We can conclude that hirsutism has a great negative impact on QoL in women as QoL, anxiety and depression level is significantly correlated with the level of hairiness. Although hirsutism is not a serious or life threatening disease, it produces social, psychological and emotional disabilities which may cause social and marital problems, it is more appropriate to offer effective medical treatment for hirsutism plus psychotherapy.

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