

Effect Of Hirsutism On Sexual Function And Quality Of Life In Egyptian Women

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Abstract

Introduction: Hirsutism is a common disorder affecting around 10% of females all over the world, and though it's considered a cosmetic problem, it can have a significant distressing effect on the quality of life of these patients.

Aim of work: is to assess the quality of life and sexual dysfunction among Egyptian hirsute women.

Patients and methods: This study included 150 hirsute females aged 20-50 years old, and 150 age matched non-hirsute women, each subject was clinically assessed to determine hirsutism score by modified Ferriman–Gallwey (mFG) scale. the patients then filled a self-assessment the validated Arabic form of DQOL and FSFI.

Results: hirsute females have significant affection of both Dermatologic Quality of Life Index (DQOL) and Female Sexual Function Index (FSFI) when compared to controls ($P < 0.001$), also the degree of affection was positively correlated to the degree of hirsutism ($P < 0.001$).

Conclusion: hirsutism can cause severe affection of the quality of life as well as the sexual function of the patients, this affection is related to the degree of hirsutism in affected females.

Keywords: hirsutism, FSFI, DQOL

Introduction

Hirsutism is a disease characterized by the growth of terminal hair in androgen-dependent areas in women, such as chin, upperlip, chest, abdomen and back. (1) Hirsutism is a common condition affecting around 5% to 32% of females all over the world, the percentage differs between races, also the degree of acceptance to the condition depends on cultural & social factors which vary among different races. (2-5)

Hirsutism is considered a distressing condition which has a negative impact on quality of life (QOL) (6). Though it is primarily a cosmetic problem, the QOL of hirsute patients is seriously affected causing severe stress to the patients due to its psychosexual impact. Hirsute patients may suffer

from social phobias, insecurities regarding personal relations and other psychological problems(7). It has also been proven to have negative impact on sexuality by causing body dissatisfaction and affecting women's feminine self-perception (8-11).

The severity of hirsutism was first assessed by Ferriman and Gallwey 1961, who introduced a scoring system including eleven androgen dependent sites (12), later, this scoring system was modified and called modified Ferriman–Gallwey (mFG) scoring system which is now the standard scoring system that defines hirsutism quantitatively.(13)The modified Ferriman-Gallwey (mFG) score grades 9 body areas from 0 (no hair) to 4 (frankly virile), including the upper lip, chin, chest, upper abdomen, lower abdomen, thighs, back, arm, and buttocks. A total score of 8 or more is considered abnormal for an adult white woman; a score of 36 is the most severe. Although due to different racial factors this cut off value could not be applied. In clinical practice, most studies consider that real hirsutism is what the woman in question thinks is excessive. (14-16)

The present study was carried out to determine the impact of hirsutism on sexuality & quality of life in Egyptian hirsute patients; as to our knowledge, it has not been assessed in Egyptian population before, due to cultural reasons it's hard to convince female patients to speak up about their sexual lives. We aim at recognizing the negative effects impact of this problem on the patients' social and sexual lives, so that we can point out the cases in need of supportive and psychological intervention along with other lines of treatment usually received in such cases.

Patients and Methods:

150 Married hirsute women (mFG>8) aged from 20-50 years recruited from the tertiary dermatology clinic, and 150 age matched non-hirsute married females recruited from the gynecology clinic of the same hospital were invited to join the study during the period from January 2020 to January 2021. An approval was obtained from our local research and scientific ethics committee and we conformed to the provisions of the Declaration of Helsinki. All participants willingly signed an informed written consent.

We targeted only married females respecting our society's culture, tradition and religious beliefs. We excluded patients with active vaginal bleeding or genital diseases as well as pregnant, nursing or menopausal women. Females suffering from any other dermatological disease or chronic illness were also excluded.

Every female in the study was clinically assessed by the first author to determine the mFG score. If the patient filled the inclusion and exclusion criteria she was asked to fill out the validated Arabic form of the Female Sexual Function Index (FSFI) scoring questionnaire (17). The second author was responsible for answering any related question to the questionnaire and excluded any

incomplete forms. This questionnaire consisted of 19 questions, where the first 2 focused on measuring sexual desire, questions 3 to 6 assessed the patients; arousal, questions 7 to 10 aimed to assess the lubrication state, question 11 to 13 focused on their ability to reach orgasm, questions 14 to 16 assessed the satisfaction and finally questions 17 to 19 measured pain during or after intercourse. The score ranged from 2 to 36. A cut off 28.1 differentiated women with or without sexual dysfunction.

To assess Quality of life, patients filled Dermatologic Quality Of Life Index (DQOL) questionnaire (18). The DLQI consists of 10 questions designed to assess QoL in patients with skin diseases. The first two questions assess symptoms and feelings, questions 3 and 4 on daily activities, comfort level is covered by questions 5 and 6; while question 7 deals with work and study; personal life is addressed in questions 8 and 9 and the impact of treatment on QoL is assessed in question 10. Total scores range from 0 to 30, whereas higher scores indicate greater impact of QoL. (19-20) DLQI scores up to 1 express no effect on QoL, scores from 2 to 5 indicate mild effect on QoL, while moderate effects range from 6 to 10. Great impact on QoL is reflected by scores from 11 to 20 and extremely large effects on QoL are assumed between 21 and 30. (18)

Statistical Method:

Data were coded and entered using the statistical package for the Social Sciences (SPSS) version 26 (IBM Corp., Armonk, NY, USA). Data was summarized using mean and standard deviation for quantitative variables and frequencies (number of cases) and relative frequencies (percentages) for categorical variables. Comparisons between groups were done using unpaired t test (21). Correlations between quantitative variables were done using Pearson correlation coefficient (22). P-values less than 0.05 were considered as statistically significant.

Results:

We approached 272 hirsute patients and 439 age matched controls. Many patients declined to participate in our study especially in the non-hirsute group denoting how our society considers this a cultural taboo. Only 164 hirsute patients agreed to participate (14 excluded) and 176 non-hirsute (26 excluded) and our study finally included 150 hirsute female patients, and 150 age matched control cases ($p=0.216$)

The demographic characteristics are displayed in Table 1. females aged 20-50 years old ($\text{mean} \pm \text{SD} = 33.7 \pm 6.79$), mFG score of hirsutism ranged from 13-35 ($\text{mean} \pm \text{SD} = 24.95 \pm 6.54$), their DQOL ranged from 16 to 26 ($\text{mean} \pm \text{SD} = 21 \pm 2$), while FSFI scores ranged from 13.01 to 23 ($\text{mean} \pm \text{SD} = 16.04 \pm 2.71$), control cases aged 20-50 years ($\text{mean} \pm \text{SD} = 32.72 \pm 6.79$), their DQOL ranged from 0-5 ($\text{mean} \pm \text{SD} = 2 \pm 1$). Table 1

When comparing DQOL & FSFI between cases & controls, hirsute cases showed significantly worse scores than controls ($P < 0.001$), also among cases there is significant correlation between degree of hirsutism (mFGscore) and both DQOL & FSFI ($P < 0.001$), where cases with higher degrees of hirsutism according to mFG scale showed highest scores of DQOL (extremely affected) and lowest scores in FSFI (worst sexual function). Table 2,3

Discussion:

Hirsutism is one of the common problems affecting females all over the world, though the percentage of affection differs between races, the average percentage of affected females is up to 10% (23), which is still a high percentage of such a distressing and socially embarrassing disease. The psychological impact of hirsutism has been well established & several studies documented this fact. The condition can cause low self-esteem, depression and even can affect the social & work relation of these patients. (2, 24-26)

The most common cause of androgen related hirsutism cases is PCO, and several studies documented the impact of the PCO itself on the quality of life & sexual function of the patients. Even some studies related these effects to the presence of hirsutism in such patients and in different races. (27,28)

In our study, we tried to assess the effect of hirsutism on the Egyptian hirsute women quality of life as well as their sexual function.

The results showed that hirsute females have significant affection of the daily activity, social & personal relations measured by DQOL as well as the sexual function measured by FSFI when compared to age matched non-hirsute females ($P < 0.001$), this affection is positively correlated to the degree of hirsutism measured by mFG scale ($P < 0.001$).

These results are consistent with several previous studies on female patients with PCO and hirsutism as a major complaint showing decreased QOL and FSFI. (29-32)

To our knowledge this is the first study to assess the DQOL and FSFI in Egyptian females with hirsutism.

Table Legend:

Table 1: raw data of patients & controls

Table 2: comparison between cases & controls regarding DQOL & FSFI

Table 3: correlation between hirsutism degree & both DQOL/FSF

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References:

1. Sachdeva S. Hirsutism: evaluation and treatment. *Indian J Dermatol.* 2010;55(1):3–7
2. Kutlu, Ö. Evaluation of quality of life of patients with hirsutism among Turkish women: A single-center cross-sectional study. *J CosmetDermatol.* 2020; 19: 3053– 3057.
3. Nina O, Jerry S. Hair growth disorders. In: Goldsmith LA, Katz SI, Gilchrest BA, Paller AS, Leffel DJ, Wolff K, editors. *Fitzpatrick's Dermatology in General Medicine.* New York: McGraw Hill; 2012. pp. 739–777
4. Akhyani M, Daneshpazhooh M, Barzegari M, et al. Frequency of hirsutism in medical student in Tehran. *Iran J Dermatol.* 2006;9(37):242–249.
5. Zargar AH, Wani AI, Masood SR, Laway BA, et al. Epidemiologic and etiologic aspect of hirsutism in Kashmiri women in the Indian subcontinent. *Fertile Steril.* 2002;77(4):674–678.
6. Thomas SA, Fan AW, Pastore LM. A review of the impact of body image on quality of life in women with polycystic ovary syndrome. *Int J Psychol Res.* 2014;9(1):17–32.
7. TabindaBaig, ShahbazAman, Muhammad Nadeem, AtifHasnainKazmi. Quality of life in patients of hirsutism. *Journal of Pakistan Association of Dermatologists.* 2014;24 (3):217-223.
8. Agnieska P, Violeta S, Ryszard P. Quality of life, mental health and self-esteem in hirsute adolescent females. *J PsychosomObstetGynaecol.* 2010;31(3):168–175.
9. Fliegner M, Richter-Appelt H, Krupp K, Brunner F. Sexual Function and Socio-Sexual Difficulties in Women with Polycystic Ovary Syndrome (PCOS). *GeburtshilfeFrauenheilkd.* 2019;79(5):498-509. doi:10.1055/a-0828-7901
10. Keegan A, Liao L M, Boyle M. 'Hirsutism': a psychological analysis. *J Health Psychol.* 2003; 8:327–345.
11. Messenger AG, de Berker DA, Sinclair RD. Disorders of hair. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. *Rook's Textbook of Dermatology.* 8th ed. Vol. 4. West Sussex: Wiley-Blackwell; 2010. pp. 66.80–9.]
12. FERRIMAN D and GALLWEY JD. Clinical assessment of body hair growth in women. *J ClinEndocrinolMetab.* 1961 Nov; 21():1440-7.
13. Hatch R, Rosenfield RL, Kim MH, TredwayDA. Hirsutism: implications, etiology, and management. *J Obstet Gynecol.* 1981 Aug 1; 140(7):815-30.
14. Escobar-Morreale HF, Carmina E, Dewailly D, Gambineri A, Kelestimur F, Moghetti P, Pugeat M, Qiao J, Wijeyaratne CN, Witchel SF, Norman RJ Epidemiology, diagnosis and management of

hirsutism: a consensus statement by the Androgen Excess and Polycystic Ovary Syndrome Society. Hum Reprod Update. 2012 Mar-Apr; 18(2):146-70.

15. Yildiz BO, Bolour S, Woods K, Moore A, Azziz R. Visually scoring hirsutism. Hum Reprod Update. 2010 Jan-Feb; 16(1):51-64.
16. DeUgarte CM, Woods KS, Bartolucci AA, Azziz R. Degree of facial and body terminal hair growth in unselected black and white women: toward a populational definition of hirsutism. J ClinEndocrinolMetab. 2006 Apr; 91(4):1345-50.
17. Rosen R, Brown C, Heiman J, et al. The female sexual function index (FSFI): A multidimensional self-report instrument for the assessment of female sexual function. J Sex Marital Ther 2000;26:191-208.
18. Finlay AY, Khan GK. Dermatology Life Quality Index (DLQI)-a simple practical measure for routine clinical use. ClinExpDermatol 1994; 19: 210-216.
19. Basra MK, Salek MS, Camilleri L, Sturkey R, Finlay AY. Determining the minimal clinically important difference and responsiveness of the Dermatology Life Quality Index (DLQI): further data. Dermatology 2015; 230: 27-33.
20. Basra MK, Fenech R, Gatt RM, Salek MS, Finlay AY. The Dermatology Life Quality Index 1994–2007: a comprehensive review of validation data and clinical results. Br J Dermatol 2008; 159: 997–1035.
21. Chan YH (2003a): Biostatistics102: Quantitative Data – Parametric & Non-parametric Tests. Singapore Med J.;44(8): 391-396.
22. Chan YH (2003b): Biostatistics 104: Correlational Analysis. Singapore Med J.;44(12): 614-619.
23. Azziz R, Carmina E, Sawaya ME. Idiopathic hirsutism. Endocr Rev. 2000;21(4):347–362
24. Ekbäck M.P. Lindberg M. · Benzein E. · Årestedt K. Health-Related Quality of Life, Depression and Anxiety Correlate with the Degree of Hirsutism. Dermatology 2013; 227:278-284
25. Sonino N, Fava GA, Mani E, et al. Quality of life of hirsute women. Postgraduate Medical Journal 1993;69:186-189.
26. HafizaAnumSaeed& Sara Latif. Appearance Distress, Social Connectedness and Quality of Life in Females with Acne and Hirsutism. Asian Journal of Multidisciplinary Studies, 7(12) December, 2019
27. Eleni A. Greenwood, Lauri A. Pasch, Marcelle I. Cedars, Richard S. Legro, Heather G. Huddleston, Association among depression, symptom experience, and quality of life in polycystic ovary syndrome, American Journal of Obstetrics and Gynecology, 2018.219:3,279.e1-279.e7

28. ZoranGluvic, Milena Lackovic, Vladimir Samardzic, Marina Vujovic, VesnaPopovic-Radinovic, JelenaTica, Milan Obradovic, EminaSudar-Milovanovic&Esma R. Isenovic. Quality of life questionnaires in PCOS- the impact of hirsutism. Endocrine Abstracts (2020) 70 EP390
29. Eftekhari T, Sohrabvand F, Zabandan N, Shariat M, Haghollahi F, Ghahghaei-Nezamabadi A. Sexual dysfunction in patients with polycystic ovary syndrome and its affected domains. Iran J Reprod Med. 2014 Aug;12(8):539-46. PMID: 25408703; PMCID: PMC4233312.
30. IuliiaNaumova, CamilCastelo-Branco, IuliiaKasterina, Gemma Casals. (2020) Quality of Life in Infertile Women with Polycystic Ovary Syndrome: a Comparative Study. Reproductive Sciences 297.
31. HuaiHeng Loh¹ & Anne Yee² &HuaiSeng Loh³ &Sharmilla Kanagasundram⁴ & Benedict Francis⁴ & Lee-Ling Lim. Sexual dysfunction in polycystic ovary syndrome: a systematic review and meta-analysis. Hormones (2020) 19:413–423
32. Deniz A, Kehribar D Y. Evaluation of sexual functions in infertile Women with Polycystic Ovary Syndrome. Nigerian Journal of Clinical Practice.2020. 23:11 ,1548-1554

Table 1: Raw data of patients & controls

	group							
	cases				control			
	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum
age	33.70	6.92	20.00	49.00	32.72	6.79	20.00	49.00
hirsutism	24.95	6.54	13.00	35.00	.	.	.	.
FSFI	16.04	2.71	13.10	23.00	29.06	4.06	17.80	33.50
DQOL	21	2	16	26	2	1	0	5

Table 2: Comparison between cases & controls regarding DQOL & FSFI

	cases		control		P value
	Mean	Standard Deviation	Mean	Standard Deviation	
age	33.70	6.92	32.72	6.79	0.216
FSFI	16.04	2.71	29.06	4.06	<0.001
DQOL	21	2	2	1	<0.001

Table 3: Correlation between hirsutism degree & both DQOL/FSFI

		FSFI	DQOL
age	r	0.090	0.085
	P value	0.275	0.281
	N	150	150
hirsutism	r	-0.807-	-0.805-
	P value	<0.001	<0.001
	N	150	150