

Association between hirsutism and mental health

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ABSTRACT

Objective: To ascertain the prevalence of psychiatric disturbances in a sample of hirsute women.

Methods: This case-control study was carried out on 100 hirsute women referred to a dermatology clinic in Sari, Mazandaran, Iran from 2004 to 2005. One hundred non-hirsute healthy control subjects were case-matched for demographic variables and completed the symptom checklist revised (SCL-90-R) instrument. Data were analyzed using SPSS software (version 11).

Results: Forty-three percent of the women reported psychological distress, with the most common subscales being interpersonal sensitivity, paranoid, depression, and obsessive compulsive. In the control group, 42% were suspicious for mental disorders. There was no significant difference between the 2 groups.

Conclusion: No significant difference concerning mental health was reported between the hirsute and non-hirsute women. This maybe due to patients having adapted to their disorder due to the presence of high social stress conditions in Iran.

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Hirsutism is defined as the excessive growth of terminal hair on the face and body of a female in a typical male pattern distribution. Hirsutism is caused by increased androgen production, bioavailability, or both, in a woman leading to the appearance of sexual hair in areas normally associated with males. Development of coarse dark hair on the upper lip and chin is particularly distressing and a common reason for women to seek medical advice. Untreated, it can be associated with considerable loss of self-esteem and psychological morbidity.¹ In some studies, prevalence rates of 5-8% of all women have been reported.^{2,3} The impact of hirsutism symptoms on a woman's quality of life may be profound and can result in psychological distress that threatens her feminine identity.^{4,5} The condition may therefore result in altered self-perception, a dysfunctional family dynamic, and problems at work.^{6,7} Many aspects of the disorder can very conceivably cause a significant amount of emotional stress.⁸ Changes in appearance can result in psychological distress and may also influence the feminine identity of patients with hirsutism.⁹ In adolescents with hirsutism, a negative impact on various aspects of health-related quality of life, including limitations in physical functioning, general behavior, and family activities, have been found.¹⁰ Different studies have reported contradictory reports of the association between hirsutism and psychological distress.^{5,11-13} Because of the potentially significant public health impact of hirsutism, we undertook the following prospective study of 200 hirsute and non-hirsute women, to assess the association of hirsutism and psychological health.

Methods. Patients and Study Design. This case-control study was carried out at the Dermatology Department of Mazandaran University of Medical Sciences, Sari, Iran from September 2004 to November 2005. Patients screened for study inclusion were Iranian women living near the southern coastline of the Caspian Sea. One hundred hirsute women (case group) were recruited from the outpatient dermatology clinic. The diagnosis of hirsutism was determined using the Ferriman-Gallway (F-G) score of more than 7.¹⁴ One hundred healthy women (control group) were recruited from the patients' families. All recruited women were required to be otherwise healthy. The 2 groups were matched for age and marital status. Exclusion criteria for all women included any known medical condition, chronic diseases, psychological disorder, and children (age less than 15 years). The study protocol was approved by the Ethics Committee of Mazandaran University of Medical Sciences. All participants gave written informed consent before entering the study, and all questionnaires were made anonymous before evaluation.

Instruments and measures. Psychological disturbances were assessed with the Persian version of the symptom checklist revised (SCL-90-R),^{15,16} which quantifies psychological distress on the dimensions of somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, aggression, phobia, paranoid ideation, and psychoticism as well as the Global Severity Index (GSI).¹⁷ In addition to this standardized instrument, a questionnaire was constructed including age, marital status, and hirsutism location and severity. The cut off point of this test based on the GSI was 0.7.¹⁸ The patients with GSI higher than 0.7, were known as mental disorder suspects.

Statistical analysis. The SCL-90-R were scored and analyzed according to the published guidelines.^{17,18} Statistical analysis of all the quantitative results of this study was carried out by chi-square test. For statistical comparisons of the 2 groups, independent-samples Student's *t* tests were computed using the Statistical Package for the Social Sciences (SPSS, Inc., Chicago, IL) statistical software version 11.¹⁹ $P < 0.05$ was used as the significant level. Data are presented as mean \pm SD.

Results. A total of 100 women with hirsutism and 100 non hirsute, healthy women were recruited. Mean age was similar between hirsute and control groups (29.8 ± 9.9 versus 31.4 ± 11.7 years). Patients with hirsutism and healthy controls did not significantly differ in age and marital status (Table 1). Of the total 100 hirsute patients, 71%, 27%, and 2% demonstrated a hirsutism group of I (F-G score of 9-17), II (F-G score of 8-26) and III (F-G score of 27-36). The presence of terminal hairs was found over body areas as follows: upper lip (24%), chin (72%), face (41%), chest (17%), breast (32%), lower abdomen (26%), thighs (18%), and neck (22%). Evaluation of psychological disturbances with the SCL-90-R scores revealed no significant score difference between the 2 groups [case 1.95 ± 0.63 ; control 1.95 ± 0.65 (Mean \pm SD)]. Accordingly, no significant difference was found on the dimensions

Table 2 • Psychological disturbances measured by symptom checklist revised (SCL-90-R) in women with hirsutism and controls.

Psychological disturbances	Case (N=100)	Control (N=100)	P-value
Somatization	1.92 \pm 0.68	1.91 \pm 0.62	NS
Obsessive-compulsive	2.08 \pm 0.71	2.04 \pm 0.72	NS
Interpersonal sensitivity	2.22 \pm 0.73	2.20 \pm 0.83	NS
Depression	2.10 \pm 0.73	2.14 \pm 0.8	NS
Anxiety	1.99 \pm 0.75	2.01 \pm 0.86	NS
Phobia	1.67 \pm 0.64	1.70 \pm 0.76	NS
Aggression	1.91 \pm 0.62	2.12 \pm 0.81	NS
Paranoid ideation	2.15 \pm 0.79	2.23 \pm 0.9	NS
Psychoticism	1.76 \pm 0.64	1.80 \pm 0.47	NS
NS = Not significant			

of somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, aggression, phobia, paranoid ideation, and psychoticism in the 2 groups (Table 2). The GSI showed no significant difference in psychological disturbances (GSI>0.7) between the 2 groups (case 46.3%; control 53.7%); and no significant relationship between GSI>0.7 and age, marital status, and severity of hair growth was observed.

Discussion. In this study, it was found that, there is no relationship between psychiatric disturbance and hirsutism. In the case and control groups, 43% and 42% were suspect of a mental disorder. Barth et al,¹¹ in a study using GHQ (General Health Questionnaire) test, evaluated the psychiatric effects of hirsutism on mental health. In our study, we used SCL-90-R test, and found that the prevalence of mental disorders was higher than Barth et al's study,¹¹ which may be due to socioeconomic status, cultural conditions, and the instrument used for evaluation and assessment. The SCL-90-R is in part more accurate because it comprises more questions. Hampel et al²⁰ showed that, the prevalence of hirsutism in patients with major depression was higher as compared with the control group, and there was no significant difference in health conditions between the 2 groups. Our study findings were similar to the reports given by Fava et al.¹² Sonino et al,⁴ studied 50 hirsute and 50 non-hirsute women matched for demographic and social conditions and revealed that the hirsute women faced more anxiety and psychotic symptoms than the control group. While no significant difference was observed for depression, aggression, and nervousness.⁴ In this study, the most prevalent disorders were interpersonal sensitivity, paranoid, depression, and obsessive compulsive, which are dissimilar to the

Table 1 • Demographic variables of hirsute patients and controls.

Variable	Case (N = 100) n (%)	Control (N = 100) n (%)
<i>Age</i>		
<20 years	13 (13)	14 (14)
20-40 years	75 (75)	75 (75)
>40 years	12 (12)	11 (11)
<i>Marital status</i>		
Single	30 (30)	27 (27)
Married	70 (70)	73 (73)

previous findings.^{4,12} Also, no significant difference was observed on the different aspects of SCL-90-R and total score, based on severity of hirsutism, which is similar to the report given by Barth et al.¹¹ The other findings indicate that, there is no statistically significant difference between the total score and mean score of different aspects with age, marital status, and the place of excessive hair growth.

It is difficult to assess the relationship between hirsutism and psychological disorders, and there are many confounding factors that influence mental health, so further complementary studies are needed. These findings suggest that personal features and socioeconomic status may play a more important role than hirsutism in causing psychological disturbances in the hirsute women.

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