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DISTINCT MANIFESTATIONS OF HIRSUTISM IN INDIGENOUS WOMEN

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ABSTRACT

This study was conducted to know the Indigenous symptoms of females with hirsutism in the perspectives of Pakistani culture. Many researchers revealed the changes in females with hirsutism which badly impacts their mental health as well as physical health. They face lots of social, emotional, psychological as well as physiological issues in daily life. Their impacts on daily life had detrimental effects in their lives. Female participants used to express the symptoms of hirsutism residing in Pakistan. The study method was quantitative research in nature. 300 female participants were a part of this research age range 18+ who are seeking laser treatments from laser/ aesthetic clinics. All females suffering from hirsutism are part of this research. The scale that was used to measure the hirsutism was Gallwey Scale[1].These research findings are beneficial for future research.

Keywords: *Hirsutism, Pakistani culture, mental, psychological, emotional, physiological, laser, aesthetic, Ferriman-Gallwey Scale.*

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INTRODUCTION

The appearance of terminal coarse hairs in a male-like distribution in females is known as hirsutism. It is a common presenting problem in the dermatological outpatient department (OPD) for cosmetic reasons, and it affects around 5–10% of women. Finding the primary cause of hirsutism is crucial, but so is understanding how to suggest the best course of action depending on that cause. A change in the type and rate of hair growth is the most crucial factor in the diagnosis. In the past, hirsutism was thought to be a sign of elevated testosterone levels in females, which might be caused by an ovarian condition or by the adrenal glands producing more androgens. Polycystic ovarian syndrome (PCOS) and ovarian tumours are the ovarian sources of hyperandrogenism. Cushing's syndrome, androgen-producing tumours, and congenital adrenal hyperplasia (CAH), which is most frequently brought on by a 21-hydroxylase deficiency, are examples of adrenal causes. The hyperandrogenic-insulin resistant-acanthosis nigricans syndrome (HAIRAN) is one of the less frequent causes. Hirsutism may result from hyperprolactinemia, which raises the production of adrenal dehydroepiandrosterone sulphate (DHEA-S). Some premenopausal women may also experience hirsutism, which might persist for a few years following menopause. This is because ongoing androgen production causes a decrease in ovarian estrogen output[2].

10% or even more than 50% could be the case. Ethnic and sociocultural factors influence the psychological issues this disease produces. In fact, minor hirsutism may be seen as a severe condition in some communities where hairlessness is a significant criterion of feminine attractiveness, yet much more severe hirsutism may be accepted in other societies.

Dark-skinned people seem to be more susceptible to hirsutism. Men can have hirsutism; however, it can be challenging to identify. Hirsutism is a symptom of early puberty in children.
Women who stop taking the oral contraceptive pill and gain weight are also prone to develop hirsutism[3].

Clinical Features of Hirsutism

Higher terminal hair growth on the sides of the face, top lip, chin, upper back, shoulders, sternum, and upper abdomen is typically seen in hirsute women. A score was developed by Ferriman and Gallwey to clinically quantify hirsutism. In their investigation of 161 women between the ages of 18 and 38, they assessed the density of terminal hair at nine distinct body locations under the androgen impact, ranging from 0 (no terminal hairs) to 4 (high terminal hair development). They came to the conclusion that hirsutism was indicated by a score of 8 or higher. But this scale is subjective[1].

Evaluation of Hirsutism

It is critical to determine whether coarse hairs are localized in male distribution or if there is a generalized increase in hair growth throughout the entire body (hypertrichosis) when a female patient appears with the primary complaint of increased hair growth. The following actions can be conducted to identify the cause of hirsutism once it has been diagnosed.
A thorough medical history should include the following: the age at which symptoms first appeared (puberty, middle age, menopause), the rate at which symptoms appeared (gradual or abrupt), any indications of virilization (acne, deepening of the voice, infrequent menstruation, loss of breast tissue or loss of normal female body contour, clitoromegaly, increased libido, increased muscle mass as in the shoulder girdle, malodorous perspiration, etc.), medication history before symptoms appeared, should be taken[1]. A thorough systemic and general physical examination should be performed, which should include feeling for any ovarian masses in the abdomen.
Simple drug withdrawal should be beneficial if the substance is the cause. Serum indicators should be evaluated in a lab to determine the precise etiology in all other cases. The different serum indicators are 17 Hydroxy Progesterone, Dehydroepiandrosterone Sulphate (DHEAS), and Testosterone.
Women who exhibit Cushing's syndrome symptoms should have their 24-hour urine free cortisol levels tested.
PCOS is indicated by an LH/FSH ratio greater than 3.
In hyperprolactinemia brought on by pituitary tambours or hypothalamic disorders, prolactin would be elevated.
Serum TSH: Hirsutism can be exacerbated by hypophyseal hypothyroidism, which raises serum TSH.
Pelvic ultrasonography can be used to find polycystic ovaries or ovarian neoplasms.
For diagnosis, the adrenal area can be imaged using magnetic resonance imaging (MRI) or computed tomography (CT).

Hirsutism in Pakistan

According to reports, up to 20–50% of women in Pakistan suffer from hirsutism, with PCOS being the most frequent underlying cause. The frequency of hirsutism among Pakistan's normal, healthy female population, especially in Peshawar, is not well documented, though. Women's hair growth is mostly evaluated by physical examination, and the most widely used tool for this purpose is the mFG score. Each of the nine body locations' hair growth is evaluated to determine this score, which ranges from 0 to 4. Hirsutism is indicated by a score of eight or higher. However, it is now known that terminal hair development differs greatly between races; hence, the value might not be generalizable to other ethnic groups[4].

Risk Factors of Hirsutism

The most susceptible group to hirsutism is women. Other factors that may increase the likelihood of hirsutism include:
Family background. Hormone-related disorders that run-in families can lead to hirsutism.
heritage. Extra body hair is more common in people of Mediterranean, Hispanic, South Asian, or Middle Eastern ancestry. Now it's becoming common in Asian countries too.
being overweight. Your body produces more male hormones when you are overweight, which can exacerbate hirsutism[5].

Objectives of the study

- To investigate the indigenous symptoms of females with Hirsutism
- To study the treatment plan towards Hirsutism

Literature Review

According to a study's multiple linear regression results (Adjusted R2 = 0.986; p < 0.001), the upper abdomen, cheek, lower abdomen, thorax, and upper lip were the top five predictors of mfg. score. We ran a simulation that displayed values for varying hirsutism prevalence rates because the minis core's positive predictive (PPV) and negative predictive (NPV) depend on the prevalence of the disease being assessed[6]. A Pakistani study in Karachi revealed that 89% of the 113 individuals in the research, who had a mean age of 15.50+7.29 years, showed moderate hirsutism (FG score 16–25). The most common cause of hirsutism was polycystic ovaries. The back (83%), arms (74%), buttocks (70%), and upper abdomen (47%), were the most frequently affected areas for hirsutism. The degree of hirsutism was positively correlated with both high BMI (p-value <0.01) and high levels of dehydroepiandrosterone (p-value = 0.006)[7]. In a study it was revealed regarding treatment of hirsutism that in comparison to other treatment methods, laser therapy has a comparatively high financial cost and a considerable mental impact on hirsute females with hirsutism[8]. According to reports, up to 20–50% of women in Pakistan suffer from hirsutism, with PCOS being the most frequent underlying cause. The frequency of hirsutism among Pakistan's normal, healthy female population, especially in Peshawar, is not well documented[4].

Methods

Research Design

A research method was used was a quantitative research method.

Sample and Sampling Strategy

The sample considered 300 hirsute females with teenagers onwards (M= 1.28, SD=.67). The sample was females with hirsutism. Data was collected through questionnaires.

Table 1: Descriptive statistics of demographic information (N=300)

Variables	f (%)
Education	-
Matric/ O-levels	4(1.3)
Intermediate/ A-levels	22(7.3)
Bachelors	155(51.7)
Masters	111(37)
PhD	8(2.7)

Variables	f (%)
Occupation	-
Working	119(39.7)
Non-working	181(60.3)
Marital status	-
Unmarried	218(72.70)
Married	82(27.3)
Belonging	-
Urban	237(79.0)
Rural	63(21.0)
Family system	-
Nuclear	214(71.3)
Joint	86(28.7)
Monthly Income	-
Below 1 Lac	137(45.7)
1 Lac and more	163(54.3)
Family History	-
Hormone Imbalance	84(28.0)
Stress	90(30.0)
Obesity	29(9.7)
Insulin Resistance	75(25.0)
Others	10(3.3)
None	12(4.0)
If yes, relationship with the person	-
Grandmother	141(47.0)
Mother	92(30.7)
Aunty	47(15.7)

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Variables	f (%)
sister	8(2.7)
Cousin	12(4.0)
Weight	
40-60kg	48(52.0)
61-80kg	121(40.3)
Above 80kg	23(7.7)
Height	-
Below 5 feet	13(4.3)
5.1-5.5	229(76.3)
5.6-6.0	58(19.3)
Duration of Hirsutism	-
1 month	80(26.7)
1-4 years	140(46.7)
4-8 years	62(20.7)
More than 8 years	18(6.0)
Preference in Coping	-
Waxing	52(17.3)
Bleach	30(9.7)
Laser Treatment	208(69.3)
Others	10(3.3)
Impacts of Hirsutism	-
Lack of Confidence	43(14.3)
Embarrassment	53(17.7)
Stress and Depression	31(10.3)
Beauty Conscious	53(17.7)
Social Isolation	50(16.7)
Time and cost	31(10.3)

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Variables	f (%)
Physically Discomfort	14(4.7)
Criticism	25(8.3)
Have you ever visited clinics for laser treatment?	-
Yes	227(75.7)
No	73(24.3)
How many times have you visited for laser treatment?	-
1-5 times	105(35.0)
5-10 times	74(24.7)
Monthly	38(12.7)
After 3-4 months	13(4.3)
Nil	70(23.3)
How beneficial did you find laser treatment?	-
Very Much	56(18.7)
Beneficial	113(37.7)
Neutral	72(24.0)
Not Much	36(12.0)
Not at all	23(7.7)
Food Preferences	-
Junk foods	89(29.7)
Chicken	63(21.0)
Meat	51(17.0)
Vegetables	82(27.3)
Others	15(5.0)

Note: f (%) = Frequency and its percentage

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Assessment Measures

Demographic Sheet: The demographic sheet includes age, education (matric, inter, bachelors, masters, PhD), occupation, marital status, belonging (urban, rural), family type (nuclear, joint), monthly income.

Ferriman-Gallwey Scale (1961;2001): One instrument for evaluating female hirsutism is the Ferriman-Gallwey scale. This method was initially explained by Ferriman and Gallwey in the Journal of Clinical Endocrinology in 1961. By include 10 additional fields and 19 areas—the sideburn, neck, inside thighs, perianal region, forearm, foot, thumb, and toes of the foot—Goodman et al. (2001) enhanced the methodology. The conventional method for assessing hirsute women involves a full body examination, which many patients and medical professionals consider to be intrusive. It was decided to evaluate the chin and abdomen based on their clinical experience[1].

Procedure

I searched for the symptoms faced by Pakistani culture regarding hirsutism by females. So, I didn't find anything regarding Pakistani culture, so I conducted a study on indigenous symptoms faced by females with hirsutism. They type of research was quantitative research in nature. Females with hirsutism were the part of this research. 300 females with hirsutism participated in this research. Before the research, consent form was taken. Ferriman-Gallwey Screening Tool was used for examining the hairs growth in body parts. Ferriman-Gallwey Scale is a screening tool consisting of 9 body parts of a female body consisting of different growth hairs and has to screen the severity of the hairs. The data was completely private and confidential and it was ensured in the consent form. After the data collection, it was entered in SPSS for further analysis.

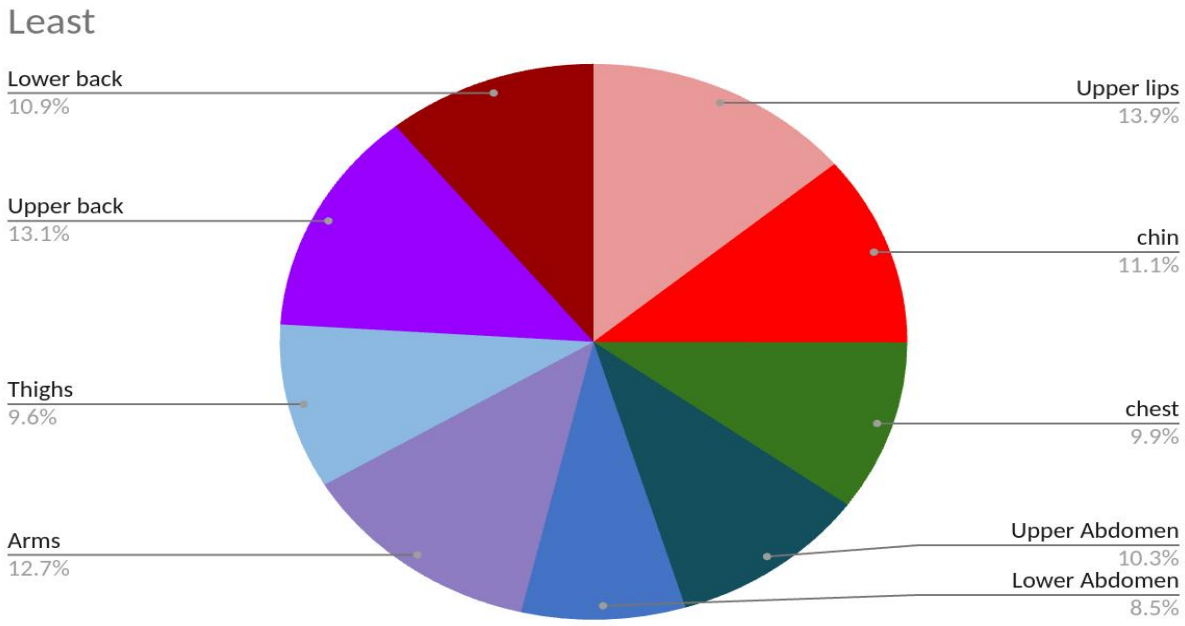
Results

The reliability of the screening tool was .71 which was pretty good for analysis. Furthermore, t-test and ANOVA tests were conducted. Comparison of means of demographic variables was carried out on the basis of occupation, geographical belongingness, family system, visit to laser clinics, age, education, marital status, family history, weight, duration of illness, and food preferences. There were no significant differences found between the above-mentioned demographic variables and score on the hirsutism.

Table 2: Indigenous Symptoms of Females with Hirsutism (N=300)

Sr.	Body Parts	1 (Least)	2 (Little bit)	3 (More)	4 (Extreme)
1	Upper lips	106	122	46	26
2	Chin	149	97	38	16
3	Chest	165	87	42	6
4	Upper Abdomen	137	90	48	25
5	Lower Abdomen	82	74	78	66
6	Upper Arms	107	111	57	25
7	Thighs	75	84	102	39
8	Upper Back	145	115	30	10
9	Lower Back (Buttocks)	97	95	83	25

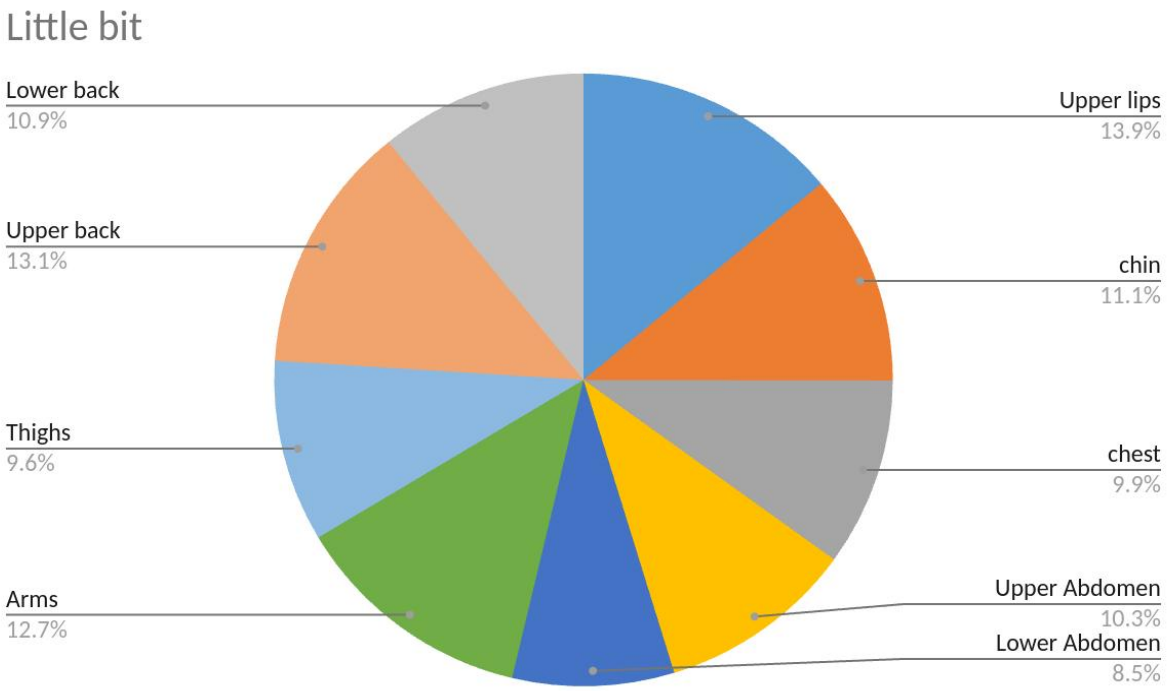
Figure 1: Pie chart indicating Least hair growth in different parts of the body using Ferriman-Gallwey Scale



This pie chart shows that the highest ranges of least hair growth in different parts of the body is the upper lips area with 13.9%, whereas the lowest range is the lower abdomen. This means that a large number of females have lowest hair growth in upper lips whereas few females have lowest hair growth in lower abdomen. Females have approximate hair growth in Chin (11.1%), Chest (9.9%), Upper abdomen with 10.3%, lower abdomen with 8.5%, arms with 12.7%, thighs with 9.6%, upper back with 13.1% and lower back with 10.9%.

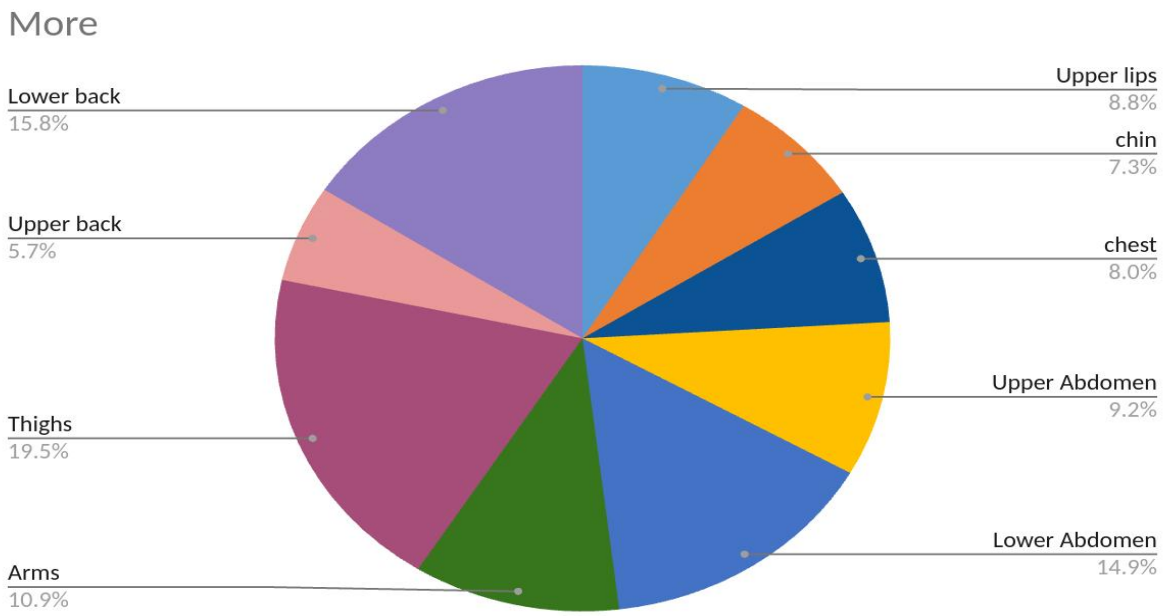
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Figure 2 : Pie chart indicating little bit hair growth in different parts of the body using Ferriman-Gallwey Scale



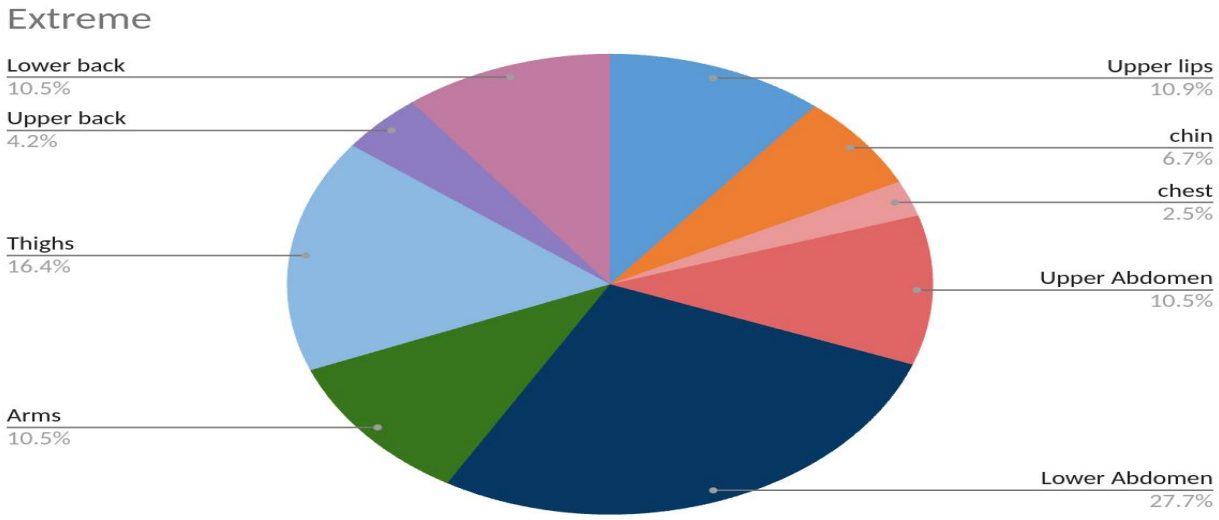
This chart indicates that little amount of hair growth in females has been observed with the highest range of 13.9%. This is so because females have a little bit of hair growth in their upper lips. The lowest range of hair growth is the lower abdomen with 8.5%. Females have approximate hair growth in Chin (11.1%), Chest (9.9%), Upper abdomen with 10.3%, lower abdomen with 8.5%, arms with 12.7%, thighs with 9.6%, upper back with 13.1% and lower back with 10.9% have been observed.

Figure 3: Pie chart indicating More hair growth in different parts of body using Ferriman-Gallwey Scale



The pie chart shows that the more amount of hair growth in females in higher number range is thighs with 19.5%. The more quantity of hair is found in the thighs of females. The more amount in lower range is upper back with 5.7%. Other parts of body ranges are upper lips with 8.8%, chest with 8%, upper abdomen 9.2%, lower abdomen with 14.9%, arms with 10.9 %, chin with 7.3% and lower back with 15.8 %.

Figure 4 Pie chart indicating the extreme hair growth in different parts of the body using Ferriman-Gallwey Scale



This chart indicates that the extreme hair growth in different parts of females body with the highest range is lower abdomen with 27.7%. This means, females suffer most hair growth in their lower abdomen. The lowest number of hair growth with respect to extreme is 2.5% in chest. Other have upper lips with 10.9%, chin with 6.7%, upper abdomen with 10.5 %, arms with 10.5%, thighs with 16.4%, upper back with 4.2% and 10.5% in lower back.

Discussion

This study was done to see the indigenous symptoms of hirsutism with respect to the Pakistani culture. Ferriman- Gallwey scale was the screening tool used in it to identify the hair growth in different parts of the body.

In our environment, hirsutism seems normal for most of our people. Nonetheless, it is associated with irregular menstruation, virilization symptoms, and metabolic syndrome[9]. This merely shows that although research was conducted based on some knowledge about hirsutism, more extensive research is still required. I thus did it with 300 females and came to the conclusion that it happens and negatively affects quality of life. They experience a wide range of emotions and psychosocial problems, but there are no treatments or therapeutic approaches for them. This should be made available to women in order to assist them deal with hirsutism and its consequences and prevent negative psychological effects on their quality of life.

The pie chart in figure no.01 shows that the highest ranges of least hair growth in different parts of the body is the upper lips area with 13.9%, whereas the lowest range is the lower abdomen. This means that a large number of females have lowest hair growth in upper lips whereas few females have lowest hair growth in lower abdomen. Females have approximate hair growth in chin (11.1%), Chest (9.9%), Upper abdomen with 10.3%, lower abdomen with 8.5%, arms with 12.7%, thighs with 9.6%, upper back with 13.1% and lower back with 10.9%.

The figure no.02 indicates that little amount of hair growth in females has been observed with the highest range of 13.9%. This is so because females have a little bit of hair growth in their upper lips. The lowest range of hair growth is the lower abdomen with 8.5%. Females have approximate hair growth in Chin

(11.1%), Chest (9.9%), Upper abdomen with 10.3%, lower abdomen with 8.5%, arms with 12.7%, thighs with 9.6%, upper back with 13.1% and lower back with 10.9% have been observed.

The pie chart in figure no.03 shows that the most amount of hair growth in females in the higher number range is thighs with 19.5%. The more quantity of hair is found in the thighs of females. The most amount in the lower range is upper back with 5.7%. Other parts of the body range are upper lips with 8.8%, chest with 8%, upper abdomen 9.2%, lower abdomen with 14.9%, arms with 10.9 %, chin with 7.3% and lower back with 15.8 %.

The figure no.04 indicates that the extreme hair growth in different parts of the female body with the highest range is lower abdomen with 27.7%. This means, females suffer most hair growth in their lower abdomen. The lowest number of hair growth with respect to extremes is 2.5% in the chest. Other have upper lips with 10.9%, chin with 6.7%, upper abdomen with 10.5 %, arms with 10.5%, thighs with 16.4%, upper back with 4.2% and 10.5% with lower back.

According to reports, up to 20–50% of women in Pakistan suffer from hirsutism, with PCOS being the most frequent underlying cause[10]. The frequency of hirsutism among Pakistan's normal, healthy female population, especially in Peshawar, is not well documented[11,12].

Conclusion

The research was conducted in Lahore Pakistan, on Indigenous symptoms in females with hirsutism under the use of a screening tool of Ferriman-Gallwey Scale. This is basically done to know the symptoms of hirsutism in Pakistani females and what factor plays the role in rise of Hirsutism. It has biological impact as well as physiological issues in the body which results in growth of hair in different body parts. Reliability tests were carried out which were good. T-test, Anova tests carried out to draw results. Moreover, it is briefly concluded that females cope up with hirsutism by the use of Laser treatments. The society in Pakistan body shames a lot as obesity is also one of the symptoms found in females with hirsutism.

Limitation

The data was collected in Lahore, Pakistan due to shortage of time. The sample size was very limited due to clinic permission varies a lot.

Suggestions

The study should be conducted on a large scale with different methods. This would give more clarity towards the research. This should be conducted all over Pakistan for better future results. Future research should be conducted with other demographics to know more about the symptoms of hirsutism.

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