

Polycystic ovary syndrome and the perception of body image by women

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SUMMARY

Introduction. Polycystic ovary syndrome is the most common endocrine disease among women in reproductive age. Symptoms of the syndrome can directly affect body image and lead to psychological consequences.

Aim. Evaluation of body image in women with polycystic ovary syndrome.

Material and methods. A group of 214 women in the age range 18-45 years old with diagnosed polycystic ovary syndrome participated in an online survey. The survey used as a data collection tool was created specifically for this paper and includes elements of Głębocka's self-perception scale and modified Ferriman-Gallwey hirsutism scale. Statistical data analysis was performed in the Statistica program using Student's t-test. The accepted statistical significance was $p \leq 0,05$.

Results. The average age of surveyed women was 25,69 years. Age was found to have a statistically significant effect on satisfaction from body image. Women below age of 25 years have substantially more difficulties with accepting their own appearance ($p=0.0446$). 4% of surveyed women had normal BMI, 28,5% were overweight, 22% were obese. 17% of the women had had PCOS for over 9 years. 58% of the women noticed that PCOS diagnosis had had an effect on their quality of life. All women had hirsutism. Minimal hair growth was mostly present on the upper back (90%), chest area (73%), lower back (68%) and chin area (67%). Extensive hair growth was most often (21%) present on the upper lip area. 2% of the women are definitely satisfied with their appearance. Every fourth surveyed woman is definitely not satisfied with their appearance. The vast majority of surveyed women have a negative perception of their own body.

Conclusions. Women with polycystic ovary syndrome are not satisfied with their own outer appearance and have a negative body image. Age is a significant factor in own-body perception. Women under the age of 25 find it more difficult to accept their own appearance. The widespread idolization of thinness leads to negative body image among women with normal body weight.

Key words: PCOS; hirsutism; body image; self-acceptance

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INTRODUCTION

Polycystic ovary syndrome (PCOS) is the most common endocrine disease among women in reproductive age. The dominating symptoms are: obesity, hirsutism, skin changes, infertility. According to the epidemiological data PCOS affects 5-10% of women in reproductive age [1]. PCOS often leads to long term consequences, causing deterioration of both the psychological and physical states of the woman [2]. Symptoms can negatively affect sense of identity, cause frustration, depression and negatively impact body image, and as such self-acceptance as well [3].

Body image is significant because of how it affects thoughts, emotions, behavior in everyday life and relationships [4]. Positive body image corresponds with higher self-esteem, confidence, sense of personal attractiveness and happiness. Negative body image is associated with lower quantity and quality of social interactions and can lead to self-destructive behaviours aimed at reaching the socially accepted ideal of beauty [5].

Proper care over a woman with polycystic ovary syndrome requires a multidisciplinary approach. Scope of medical and psychological care should include the extent of symptoms' effect on a woman's well-being, body image and quality of life [6].

Symptoms having the greatest importance to a woman are hirsutism, acne and obesity [7]. Hirsutism is defined as the presence of terminal hair (rough, thin, saturated with pigment) in typically male locations in women [8]. It is more than just a cosmetic problem, since it is often associated with lowered quality of life and a feeling of "not being a female". Hirsutism occurrence is caused in 80% of the cases by androgen excess present in PCOS [9].

PCOS symptoms can have different intensity and present typical signs (anovulation, irregular menstruation or amenorrhea, hirsutism, acne, male-pattern hair loss, hormonal disorder-

ders), reproductive signs (menstrual cycles without ovulation), hyperandrogenic signs (androgen excess), metabolic signs (obesity, type 2 diabetes, insulin resistance, arterial hypertension, hyperlipidemia) [10].

Excess body mass is present in 30-60% of women, depending on race and place of origin [11]. Women with thin type PCOS also have a higher amount of visceral fat than normal [12]. Excess of adipose tissue increases androgen excess, insulin resistance, dyslipidemia, problems with fertility and menstrual disorders. It also correlates with increased fasting blood sugar level [20]. Research shows that reduction of body weight by just 5-10% has a positive effect on metabolic and psychological health and fertility [13].

Polycystic ovaries syndrome is the most common cause of recurrent miscarriage and infertility caused by anovulation [2]. As many as 74% women with PCOS can have fertility problems [14]. Motherhood is an important part of the lives of many women, as such it is an essential element of their social role, growth and has a significant effect on self-realization in the lives of many women. Infertility diagnosis impacts a woman's life and can lead to lack of interest in daily life, increased anxiety, depression and worsening relations with her partner or family.

Body image perception is a complicated phenomenon, which has the following aspects: cognitive, emotional, social and cultural. Media have a strong influence on the ideal of beauty, which is additionally empowered by social emphasis on slim figure. This can lead to dissatisfaction from body image, even with nutrition normal for age and gender [15]. The way of experiencing one's own body affects social function, self-esteem and quality of life. Body image is connected to evaluation of femininity. Body image is considered to be a fundamental element of psychological and physical health of women.

Out of many behaviours affected by body image, the interpersonal behaviours are considered to be most important. People who have negative body image have a dislike of public speaking, are more timid and withdraw from relationships with others. During the process of communication they are focusing on receiving. Based on this, it can be assumed that satisfaction from one's body leads to greater confidence and comfort in social relations, which affects both intimate and daily life interactions. Negative body image on the other hand corresponds

with higher social anxiety and withdrawal from social interactions [16]. Subjective perception of one's body is not correlated with how it's perceived by external observers in a simple way. Perception of one's body is largely affected by social experiences. Body image is a process that continues throughout the entire life and can be greatly influenced by others. The largest impact is caused by important people in particular stages of life [4].

PCOS and its symptoms become apparent at the time of a woman's life when choice of partner and marriage plays an important role. Because of this, changes in physical appearance and feeling of losing femininity can be especially severe and cause excessive stress [17]. Extreme dissatisfaction from one's body can lead to dysmorphic body disorder [16], which is characterised by unreasonable focus on imaginary or slight body defects. Because of importance put on outer appearance, people with dysmorphic body disorder see themselves as unattractive and have a negative opinion of themselves [18].

AIM

The goal of this paper is evaluation of own-body perception in women with polycystic ovary syndrome.

MATERIAL AND METHODS

227 women in the age range 18-45 years old with diagnosed PCOS participated in an online survey. Ultimately 214 of those were qualified to the final analysis. The survey used as a data collection tool was created specifically for this paper and includes elements of Głębocka's self-perception scale and modified Ferriman-Gallwey hirsutism scale. Subscale recognition-emotions KWCO serves to gauge opinion about own appearance, pressure to change own appearance to be more attractive from close environment and affective component, that is emotions felt in relation to own body and its appearance, general mood, guilt or anxiety. Rating scale was widened and allowed to answer in range from 1 to 5 (1 – the surveyed person does not agree with the given statement, 5 - the surveyed person completely agrees with the given statement).

The Ferriman-Gallwey scale was presented with scores from 1 to 4, with 1 meaning the lowest amount of hair and 5 meaning the highest amount of hair. In addition to the qu-

Tab.1. Amount of body hair in the surveyed group of women according to the hirsutism Ferriman-Gallwey rating scale

Hair of upper lip				
	97(45%)	35(16%)	36(17%)	46(22%)
Hair of chin area				
	144(67%)	28(13%)	23(11%)	19(9%)
Hair of upper abdomen area				
	110(51%)	58(27%)	33(16%)	13(6%)
Hair of lower abdomen				
	67(31%)	46(22%)	39(18%)	62(29%)
Hair of the chest area				
	157(74%)	43(20%)	9(4%)	5(2%)
Hair of the upper arms				
	127(59%)	34(16%)	31(15%)	21(10%)
Hair of thighs				
	81(38%)	57(27%)	54(25%)	2(10%)

Tab.1. (cont.)

Hair of upper back				
	193(90%)	16(7,5%)	4(2%)	1(0,5%)
Hair of lower back				
	146(68%)	41(19%)	19(9%)	8(4%)

estions pictures representing the amount of hair for the score on the scale were provided. A descriptive scale, corresponding with the digital scale, was used in this paper. Score of 1 is equal to small amount of hair, score of 2 - medium amount of hair, score of 3 - large amount of hair, score of 4 - very large amount of hair. A digital version of the questionnaire was uploaded to the social website Facebook and made available to women with polycystic ovary syndrome.

Statistical data analysis was performed in the Statistica program using Student's t-test. The accepted statistical significance was $p \leq 0,05$.

RESULTS

The average age of surveyed women was 25,69 years. The most numerous group (54%) were women in age range 24-29. 56% of surveyed women had higher education. Majority of the women (79%) were in an informal relationship. 45% of the women had normal BMI, 28,5% were overweight and 22% were obese. 17% of the women had PCOS for over 9 years. The most numerous group (34%) were women who have been diagnosed within the last year. The vast majority (87%) of the women had no children.

The amount of body hair present in the surveyed group of women was rated with the modified hirsutism Ferriman-Gallwey rating scale and presented in table 1.

Table 2. shows the data representing subjective rating of well-being and self-acceptance of one's body by the surveyed women. Rating scale was widened and allowed to answer in 1 to 5 range (1 – the surveyed person does not agree with that statement, 5 – completely agrees with that statement). Data analysis of the opinions about one's own body confirms that most women with polycystic ovary syndrome definitely feel negative emotions towards their bodies and do not feel attractive (tab.2.).

This paper reviews the effect of age on satisfaction from one's appearance. The surveyed women were split into a group up to and including 25 years old and a group above 25 years old. A subgroup of 90 women who declared a degree of satisfaction from their appearances were selected from the surveyed group. It was found that age of surveyed women had a statistically significant effect on their rating of satisfaction from their appearance. Women below 25 years old have a substantially greater difficulty with accepting their own appearance ($p=0.0446$) (tab.3).

Additionally it was found that women who gave multiple births on average felt more attractive compared to women who did not give birth ($p=0.0438$).

No significant effect of marital status on perception of one's external appearance was found ($p=0,1242$). Single women and women in relationships are on average concerned by their external appearance in similar amounts.

No effect of fertility problems on the rating of one's body was found as well (p=0,3233).

DISCUSSION

Within the research of polycystic ovary syndrome there recently has been an increase in attention given to psychological aspects of this disease. Symptoms associated with PCOS can directly affect body image and lead to psychological consequences. Body image has an impact on social relations, quality of life and self-esteem. Negative body image leads to consequences, such as increased anxiety, lowered self-esteem and major depressive disorder.

The average age of surveyed women was 25,69 years. In this phase of life women can feel an especially high pressure regarding their physical appearance, they are the main target of media and advertisements imposing on them an ideal of beauty accepted by Western culture. Conducted research has proven that a woman's age has a substantial effect on her rating

of her satisfaction from her appearance. Women below 25 years old have considerably greater difficulties with accepting their own appearance (p=0.0446).

In both literature on the subject and in own studies hirsutism was found to be a large obstacle in accepting one's own body. It is estimated 70% of women with PCOS have hirsutism [19]. In many cultures body hair is considered a male feature, and as such body hair on women, especially facial hair, is not accepted. Women in the Western society generally strive to achieve a hairless body, which is accompanied by a large societal pressure. As such, hirsutism can negatively affect women's mental health and cause deterioration in their social life. Facial hair is the main problem of women with polycystic ovary syndrome, which leads them to consider excess hair as the factor that negatively affects their mental health and lowers quality of life. Hirsutism should not be considered just an individual problem of women with PCOS, but should be redefined as a social pro-

Tab. 2. Subjective rating of well-being and self-acceptance of one's body by women with PCOS

No	Rate statements	1	2	3	4	5
		Definitely no	Probably no	Hard to say	Probably yes	Definitely yes
1.	I am happy with my appearance	54(25%)	63(30%)	57(27%)	35(16%)	5(2%)
2.	I feel accepted by the environment	11(5%)	20(9%)	73(34%)	70(33%)	40(19%)
3.	I am a happy person	23(11%)	42(20%)	57(27%)	65(30%)	27(12%)
4.	I dress to hide imperfections of my body	21(9,8%)	19(9%)	22(10,2%)	66(31%)	86(40%)
5.	I like active recreation	16(8%)	36(17%)	73(34%)	59(28%)	28(13%)
6.	When I realise my weight I get into a bad mood	33(16%)	31(14%)	27(12%)	32(15%)	91(43%)
7.	A slim body is preferable in our culture	4(1,8%)	5(2,2%)	21(10%)	49(23%)	135(63%)
8.	I worry about my outer appearance	11(5%)	18(8%)	34(16%)	72(34%)	79(37%)
9.	I have always felt I am too fat	31(17%)	22(10%)	23(11%)	47(22%)	85(40%)
10.	I am afraid that I might put on weight	21(10%)	12(6%)	23(11%)	35(16%)	123(57%)
11.	Men like slim women more	5(2%)	12(6%)	27(13%)	54(25%)	116(54%)
12.	I believe clothes look better on a slim woman	7(4%)	6(3%)	26(12%)	46(21%)	129(60%)
13.	I like to do sports	20(9%)	37(17,5%)	73(34%)	56(26,5%)	28(13%)
14.	I use diets to lose weight	57(27%)	48(22%)	46(21%)	34(16%)	29(14%)
15.	I often hear critical opinions about my appearance	69(32%)	74(35%)	34(16%)	28(13%)	9(4%)
16.	I feel physically attractive	55(25,5%)	55(26%)	58(27%)	38(17,5%)	8(4%)
17.	I feel anger towards my own body	30(14%)	38(17,5%)	35(16%)	51(23,5%)	63(29%)

Tab. 3. Evaluation of relationship between age and body image (t-Student test)

Average satisfaction up to 25 years old	Average satisfaction above 25 years old	Number of n - relevant	p
2,28	2,61	90	0,0446

Tab. 4. Evaluation of relationship between giving birth and body image (t-Student test)

Average attractiveness – giving birth	Average attractiveness – not giving birth	Number of n - relevant	p
2,64	1,96	25	0,0438

blem. Understanding present norms and ideals of femininity is required to understand difficulties women with polycystic ovary syndrome face [20].

Obtained results of own research confirmed the presence of excessive hair of various amounts in all surveyed women. Hirsutism with small amounts of hair was found in all of the women, it affected all characteristic body areas, with the largest percentage being hair of the upper back (90%), chest area (74%), lower back (68%) and chin area (67%). Very large amount of androgenic hair was also found in all of the women, with the largest percentage (22%) being hair of the upper lip area. Acquired results demonstrate that hirsutism can be a psychological barrier or even a dysmorphic disorder. However, it is important to consider the fact that in own research surveyed women subjectively rated their hirsutism.

Obesity is significantly correlated with polycystic ovary syndrome. Physical attractiveness, and slimness in particular, is highly prized in society, especially those of Western culture. Women with excess body weight are typically viewed through a different lens because of it and are considered to be lacking control. Physical attractiveness is assumed to have an impact on interpersonal abilities and value as an employee. Stigmatisation of obesity is multifaceted. Even 80% of obese children or adolescents can experience bullying or criticism because of their body weight. Bias against the obese can be found in 3 year olds already [16]. Women who are obese mask their body by clothes selection, way of movement and posture more often than people with normal body weight. A connection between dissatisfaction from one's body and binge eating disorder was also found [21].

In own research 20% of the surveyed women are satisfied with their appearance. Every fourth woman does not accept her own appearance. A small percentage of women is satisfied with their own body. 40% of the surveyed women wear cloths in a way to hide imperfections of their body. 31% kobiet zdecydowanie nie jest i raczej nie jest szczęśliwych. Realising their own body weight makes 43% of the women get into a bad mood. 71% of the women worry about their appearance. Own studies show that women with polycystic ovary syndrome do not feel well and suffer the consequences of negative body image. Similar relationship was show in research of Farkas et al. The authors are emphasizing the fact that women with PCOS,

according to their own evaluation, cannot adjust to the societal norm of appearance, in contrast to other women. Because of lack of comfort, their feminine identity is endangered. [17].

Answers about the role of body weight in accepting own appearance were found in both open-ended and closed-ended questions. The majority of the women (63% and 54%) strongly agreed with the statements “*a slim body is preferable in our culture*” and “*men like slim women more*”. Average value of BMI among surveyed women was 25,89 which, according to recommendations, suggests being overweight. 43% of the women had a normal body weight according to BMI, but despite that answers to questions “*I have always felt I am too fat*” and “*when I realise my weight I get into a bad mood*” suggest they are not accepting their current body weight. Acquired results confirm the presence of idolization of slimness in Western culture and mean that women have a flawed perception of their own bodies. Consciousness of their body weight or a possibility of its increase puts them in a bad mood. This problem was also noticed by other researchers, who observed that among both women with or without PCOS the ideal body type is a slim silhouette. Women did not accept their body type, because it differed from the ideal. No acceptance of their body weight lead to negative body image. Brak akceptacji swojej masy ciała następnie prowadził do negatywnego obrazu własnego ciała. This relationship applies not only to overweight women, but also to those with normal body weight [22].

In own research 51% of the women (19% - definitely yes, 33% - probably yes) feel accepted by their environment. Divergent results were shown in Wiśniewska's research, where a correlation between excess of body mass and stigmatisation together with lack of social acceptance was shown. [16].

RESULTS

Women with polycystic ovary syndrome are dissatisfied from their outer appearance and have a negative body image. Age is an important factor affecting perception of one's body. Women below the age of 25 have a higher difficulty with accepting their appearance. The widespread idolization of thinness leads to negative body image among women with normal body weight.

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