HEALTH PSYCHOLOGY REPORT · VOLUME 4(2), 2016
ORIGINAL ARTICLE

Dorota Mącik

Loss of attributes of femininity, anxiety and value crisis. Women with polycystic ovary syndrome compared to women after mastectomy and in menopause

BACKGROUND
Polycystic ovary syndrome (PCOS) is a relatively widespread disease and a main cause of fertility problems. The disease diagnosis is frequently related to changes in the value hierarchy. However, it can be treated as a "loss of/threat to" femininity. Similar aspects of the loss of part of femininity are connected with menopause and mastectomy.

PARTICIPANTS AND PROCEDURE
One hundred and forty-five women were examined in total: 42 with the PCOS diagnosis, 20 after mastectomy, 42 in menopause and 41 healthy women (reference group). Standard measurement methods were used: the Value Crisis Questionnaire by P. Oleś and the IPAT Anxiety Scale – Self Analysis Form by R. B. Cattell.

RESULTS
Women suffering from PCOS obtained significantly higher indexes of both crisis and anxiety compared to other groups, whereas women after mastectomy and in menopause did not differ between one another in tested variables, and they did not differ from healthy women either. It was noted that the most relationships between variables were observed in the group of women in menopause (significant correlations between almost all dimensions), while there are few relationships in women after mastectomy. In women with PCOS (a relatively small number of correlations) relationships of the greatest strength relate to the relationships of negative self-esteem and guilt proneness with all dimensions of the value crisis.

CONCLUSIONS
Polycystic ovary syndrome, despite having a relatively non-threatening course, is experienced much more strongly by women compared to mastectomy and menopause. It is associated with strong internal anxiety and degradation of the value hierarchy.

KEY WORDS
anxiety; menopause; mastectomy; polycystic ovary syndrome; crisis of values

ORGANIZATION – Institute of Psychology, The John Paul II Catholic University of Lublin, Lublin, Poland

AUTHORS' CONTRIBUTIONS – A: Study design · B: Data collection · C: Statistical analysis · D: Data interpretation · E: Manuscript preparation · F: Literature search · G: Funds collection

CORRESPONDING AUTHOR – Dorota Mącik, Ph.D., Institute of Psychology, The John Paul II Catholic University of Lublin, 14 Racławickie Avenue, 20-950 Lublin, Poland, e-mail: dmacik@kul.pl

TO CITE THIS ARTICLE – Mącik, D. (2016). Loss of attributes of femininity, anxiety and value crisis. Women with polycystic ovary syndrome compared to women after mastectomy and in menopause. *Health Psychology Report*, *4*(2). doi: 10.5114/hpr.2016.55963

RECEIVED 04.01.2015 · REVIEWED 02.02.2015 · ACCEPTED 25.02.2015 · PUBLISHED 21.12.2015

BACKGROUND

Polycystic ovary syndrome (PCOS) is an endocrine disease which affects women of childbearing age. Disease prevalence reaches 3-12% according to different studies (Nowotnik, 2012). Excessive progesterone and androgen production disorders, hypothalamic-pituitary-adrenal axis disorders, and excess of luteinizing hormone (LH) are the primary causative factors of PCOS (Pawlikowski, 2003). Moreover, the contribution of genetic factors was identified (Jakubowski, 2005).

The disease symptoms include:

- irregular menstruation, reduced fertility, miscarriages (high levels of LH and insulin influence development and implantation of a fertilized egg cell);
- hirsutism, acne, thinning of hair in the forehead region, obesity and overweight, including a high risk of non-insulin-dependent diabetes mellitus type 2;
- other: pelvic pains, acanthosis nigricans (darkening of the skin around the groin), derma papilla, mood swings, fatigue, depression (Elsheikh & Murphy, 2011).

From the above symptoms the most bothersome symptom for women is reduced fertility or infertility – PCOS is the most frequent cause of problems with conception and carrying pregnancy to term.

INFERTILITY AND ITS CONSEQUENCES

For the vast majority of women motherhood is an important aspect of life. The socialization process from birth prepares a woman for the role of a mother that becomes an element of her identity and a part of the self-realization process (Makara-Studzińska & Wdowiak, 2008; Nowotnik, 2012). Problems with conception lead to experiencing unpleasant situations connected with medical treatment – women indicate objectifying them as being patients as well as the fact that the sex act becomes focused only on the idea of baby conception, whereby it loses the quality of the relationship. In some cases this is related to problems in fulfillment of sexual needs or libido reduction as well as marital and partner difficulties. It also needs to be emphasized that for these women sexual relations are additionally burdened with physical symptoms of PCOS (hirsutism, obesity).

The diagnosis of infertility is accompanied by so-called "infertility stress". Its consequences may include: loss of interest, reduced or depressive mood, withdrawal from interpersonal relationships, high level of fear and anxiety, sleep disorders, lowering of physical and mental efficiency, sense of helplessness, guilt, and lower self-esteem (Makara-Studzińska & Wdowiak, 2008; Specjalski, 2013). The diagnosis of infertility, calling into question the possibility of realization of one of the important social and personal roles, often leads to the necessity of redefining the value hierarchy, life objectives, relationship and its durability, and own expectations about the future. For these reasons infertility is considered a wide problem including both biological factors and effects as well as psychological and social ones (Bidzan, 2010).

On this basis, it can be stated that PCOS, being a relatively mild disease which does not cause any direct threat for life or physical quality of life, carries essential psychological consequences for suffering women. So far research on PCOS has been mainly focused on defining these consequences and their intensity in comparison to healthy women (Açmaz et al., 2013; Deeks, Gibson-Helm, Paul, & Teede, 2011), or with other groups of ill people (Cinar et al., 2011). There are a few, small Polish studies on problems of women suffering from PCOS and they are mostly focused on quality of life (Katulski & Męczekalski, 2012; Tatarchuk, Voronenko, Ganzhiy, & Burlaka, 2013; Zachurzok, Gawlik, Nowak, Drosdzol-Cop, & Małecka-Tendera, 2014). The main aim of these studies is also comparision of intensity of existing problems between ill and healthy women (or with or without symptoms) or comparisons within the women with PCOS.

OTHER PROBLEMS ASSOCIATED WITH THE QUALITY OF "FEMININITY"

In the meantime, it is also worth paying attention to the fact that other health problems typical of women, natural in their course, e.g. menopause and problems related to it, or life-threatening such as breast cancer, also carry specific women's reactions. Both menopause and mastectomy are mentioned in the context of "the loss of attributes of femininity" (Guglas et al., 2007; Mącik, Ziółkowska, & Kowalska, 2011; Mącik & Ziółkowska, 2012). In this aspect they are similar to PCOS, which also – reducing the possibility of having a baby – influences the essential aspect of this femininity. Of course there is a significant difference between the mentioned problems: mastectomy as a radical therapy of neoplastic disease is related to direct experience of threat to life, whereas PCOS is a disease which gives rise to numerous symptoms of different troublesomeness, but it is not directly dangerous, while menopause (despite some troublesomeness of symptoms) is a natural stage of life. However, I have found no studies which compare these physical states, regarding psychological effects which they have for the women experiencing them. However, it seems that it is worth asking such a question. Each of these states can lead to changes in perceiving oneself as a woman by the loss or the threat of loss of features significantly related to femininity. This loss, however, like in many other cases, is naturally associated with an increase of anxiety. It is known from existing research that in the discussed

situations anxiety increases (see e.g. Bidzan, Podolska, Bidzan, & Smutek, 2011). At the same time each of these situations also requires changes in the value hierarchy due to the necessity of redefining social roles and objectives to achieve.

With regard to the above, it was asked if women suffering from PCOS feel anxiety associated with a diagnosis and also if the situation they are in is connected with a necessity of changes in the value hierarchy. It was also asked if expressing stress related to the PCOS diagnosis and difficulties in getting pregnant or inability to get pregnant is comparable to other situations connected with the loss of "the attributes of femininity". It was decided to compare these women with women after menopause (loss of fertility) or after mastectomy (loss of external attributes of femininity – breasts). The present study was focused on defining intensity of anxiety as well as the value crisis – these measures allow one to assess the crisis associated with the analyzed situation. A crisis occurs when important value becomes threatened, whereas the sense of threat causes anxiety and concern. On the basis of the above considerations, the following questions and research hypotheses were formulated:

RQ1: Does a value crisis within the value system occur in groups of examined women, and what is its intensity?

H1. The value crisis is observed in each group of ill women, while it does not occur in healthy women.

H2. Women with PCOS experience the crisis to a much lesser extent than women after mastectomy but a significantly greater extent than women in menopause.

RQ2: What is the anxiety level of women suffering from PCOS compared to healthy women and women suffering from other women's ailments?

H3. Women suffering from PCOS show a higher anxiety level than healthy women but lower than women after mastectomy.

H4. Women with PCOS have lower integration and emotional stability than women in menopause.

PARTICIPANTS AND PROCEDURE

To verify the above hypotheses, 145 women were examined, including 42 with PCOS diagnosis and with infertility treatment (examined in the hospital department), 20 women after mastectomy (not more than one year after the operation, after completed treatment, with lack of other forms of therapy of cancer, examined during control visits), 42 women in menopause (diagnosed by a gynecologist, without using hormone replacement therapy) and 41 healthy women as a reference group. Women with PCOS diagnosis were at the age of 20-30, and healthy women were age-matched. Women in menopause and women after mastectomy were at the age of 45-60. The women had at least secondary education. Most of them defined their financial situation as average or good. Research was carried out in accordance with the Declaration of Helsinki retaining the right to refuse or discontinue at any moment and ensuring anonymity. The approval of the Bioethics Committee was not applied for. A conflict of interest did not occur.

To verify the hypotheses two methods were used:

1. IPAT Anxiety Scale – Self Analysis Form by Raymond B. Cattell, translated by K. Hirszel and interpreted by Z. Płużek (Łazowski & Płużek, 1982). It measures factors indicating the presence of general and hidden anxiety:
   - Q3 – lack of integration – wide discrepancy between real and ideal self, tendency to dream and worry, immaturity, agitation,
   - C – emotional instability – immaturity, timidity, strain, impatience, low frustration tolerance, tendency to angry and irritable reactions, low self-esteem,
   - L – suspiciousness – a person who is jealous, self-contained, shy, critical, cold, tense, blaming others for his/her failures,
   - O – guilt proneness – a person who worries a lot, alone, has difficulties in concentration, has a feeling of inadequacy, accompanied by lack of ambitions, may be self-aggressive,
   - Q4 – tension – low frustration tolerance, high demands of the superego in tandem with a big pressure of urges, lack of good adaptation, different anxieties and concerns.

   Test reliability for individual scales ranged from .70 to .86.
2. A Value Crisis Questionnaire was constructed by P. Oleś. It is used for testing adults (students). The questionnaire consists of 4 subscales: H – difficulties in hierarchical organization of values, Z – sense of value loss, D – disintegration/disintegration of valuing process, R – sense of value unrealization. Test reliability according to Cronbach's α was .90 (Oleś, 1998).

RESULTS

All calculations were performed using the statistical package SPSS v.21. To verify the hypotheses, comparisons of four groups of women in terms of anxiety and dimensions of the value crisis were made. To compare the groups a one-way ANOVA was used. As the assumption of equality of variances in the group was not met, Dunnett's T3 test was used as a *post-hoc* test.

Table 1 presents differences between groups with their significance in the value crisis. The means are presented in Figure 1.

Table 1

ANOVA values and post-hoc significance between examined groups for value crisis

	ANOVA		Dunnett's T3					
	F	*p*	PCOS – Healthy	PCOS – Mastect.	PCOS – Menop.	Mastect. – Menop.	Mastect. – Healthy	Menop. – Healthy
Value Crisis								
H	10.69	< .001	< .001	.030	< .001	.535	.796	.952
Z	15.33	< .001	< .001	.013	< .001	.546	.235	.893
D	6.85	< .001	< .001	.669	.027	.665	.082	.400
R	9.53	< .001	< .001	.069	< .001	.435	.795	.887

Note. H – difficulties in hierarchical organization of values, Z – sense of value loss, D – disintegration/disintegration of valuing process, R – sense of value unrealization.

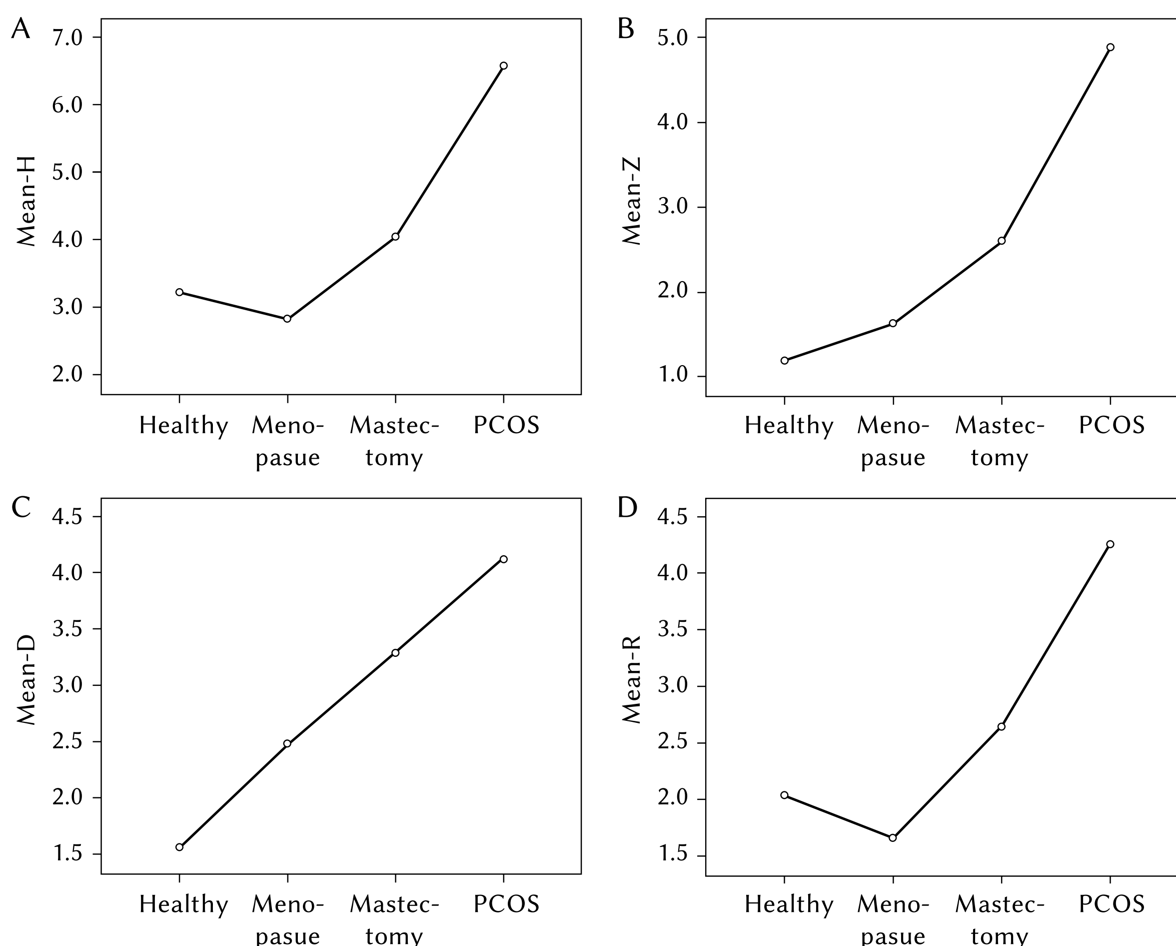

Figure 1. Group means for Value Crisis (source: own elaboration).

The results show the significant value of the *F* test for ANOVA for all dimensions of the value crisis. The comparison of post-hoc tests shows that women with PCOS differ from other groups of women almost in all dimensions of the crisis, while other groups are very similar to one another. Referring to the hypotheses, the following findings were obtained:

H1. *The value crisis is observed in all groups of ill women, but it does not occur in healthy people.* The results show that the value crisis occurs in women with PCOS and in women after mastectomy; it does not occur in healthy people and in women in menopause.

H2. *Women with PCOS experience the crisis to a much lesser extent than women after mastectomy but significantly more strongly than women in menopause.*

Table 2

ANOVA values and post-hoc significance between examined groups for Anxiety Scale

	ANOVA		Dunnett's T3					
	F	*p*	PCOS – Healthy	PCOS – Mastect.	PCOS – Menop.	Mastect. – Menop.	Mastect. – Healthy	Menop. – Healthy
Anxiety Scale								
Q3	9.27	< .001	< .001	.314	< .001	.373	.144	.910
C	4.30	.006	.004	.703	.076	.819	.325	.727
L	4.08	.008	.007	.579	.043	.828	.524	.920
O	23.65	< .001	.001	.001	.006	.704	< .001	< .001
Q4	9.87	< .001	< .001	.847	.764	.383	< .001	.003

Note. Q3 – lack of integration, C – emotional instability, L – suspiciousness, Q4 – tension, O – guilt proneness.

Women with PCOS experience a much stronger crisis than women in menopause but also much stronger than women after mastectomy.

Table 2 presents similar comparisons within the second dependent variable – the level of anxiety.

The ANOVA shows the existence of significant differences for each dimension. *Post-hoc* comparisons show that women with PCOS differ in each dimension from healthy women, and in three dimensions from women in menopause, but they are quite similar to women after mastectomy. There are also differences between healthy women and women after the operation and women in menopause. The distribution of means is presented in graphs in Figure 2.

On the basis of the obtained results, the asked questions and the research hypotheses can be answered as follows:

H3: *Women suffering from PCOS show a higher level of anxiety than healthy ones but lower than women after mastectomy.* The obtained results indicate that women suffering from PCOS show a higher level of anxiety compared to both healthy women and other tested groups.

H4: *Women with PCOS have lower integration and emotional stability than women in menopause.*

Verification of the hypothesis indicates that these women have lower self-esteem and self-integration in comparison to all tested women.

The last analysis was to assess relationships between anxiety and the value crisis. The Pearson product-moment correlation coefficient (Pearson's *r*) was used and its values for each group are given in Table 3. The correlations were interpreted in accordance with a classical typology, with a classical classification of the strength of the relationship according to Guilford (1960).

The most significant correlations between variables occur in the group of women in menopause; observed relationships are of average strength. The smallest number of significant relationships is observed in the group of women after mastectomy.

DISCUSSION

Analyzing the value crisis, significant differences between the analyzed groups of women especially in comparison to the health situation (healthy women and women in menopause) as well as women after mastectomy can be observed. Polycystic ovary syndrome is related to a significantly higher value crisis than in the case of other groups. This crisis manifests itself in all its components while the highest average values occur in the dimension connected with the difficulty in organizing values in the hierarchy. It indicates a difficult moment in which these women are undergoing diagnostics. They have to face uncertainty concerning the possibility of conceiving a baby and realizing themselves in the role of a mother. The values connected with a family are usually located quite high in the hierarchy, whereas here they are called into question. Thus, the risk occurs that a developed current value system will have to undergo changes while there is no idea yet for another way of its organization; hence there is a subjective feeling of losing values – it is known that something which was important may be not fully realized, and it is not known what else could be equally important. At the same time these women experience significantly bigger problems connected with disorganization of the process related to valuation. They also have the feeling that they do not realize values which are important for them. These difficulties are clearly bigger not only in comparison to the control group of healthy people or women in menopause but also in relation to women after mastectomy.

So it means that PCOS is a disease which in a significant way influences valuation even more than experiencing a potentially life-threatening disease

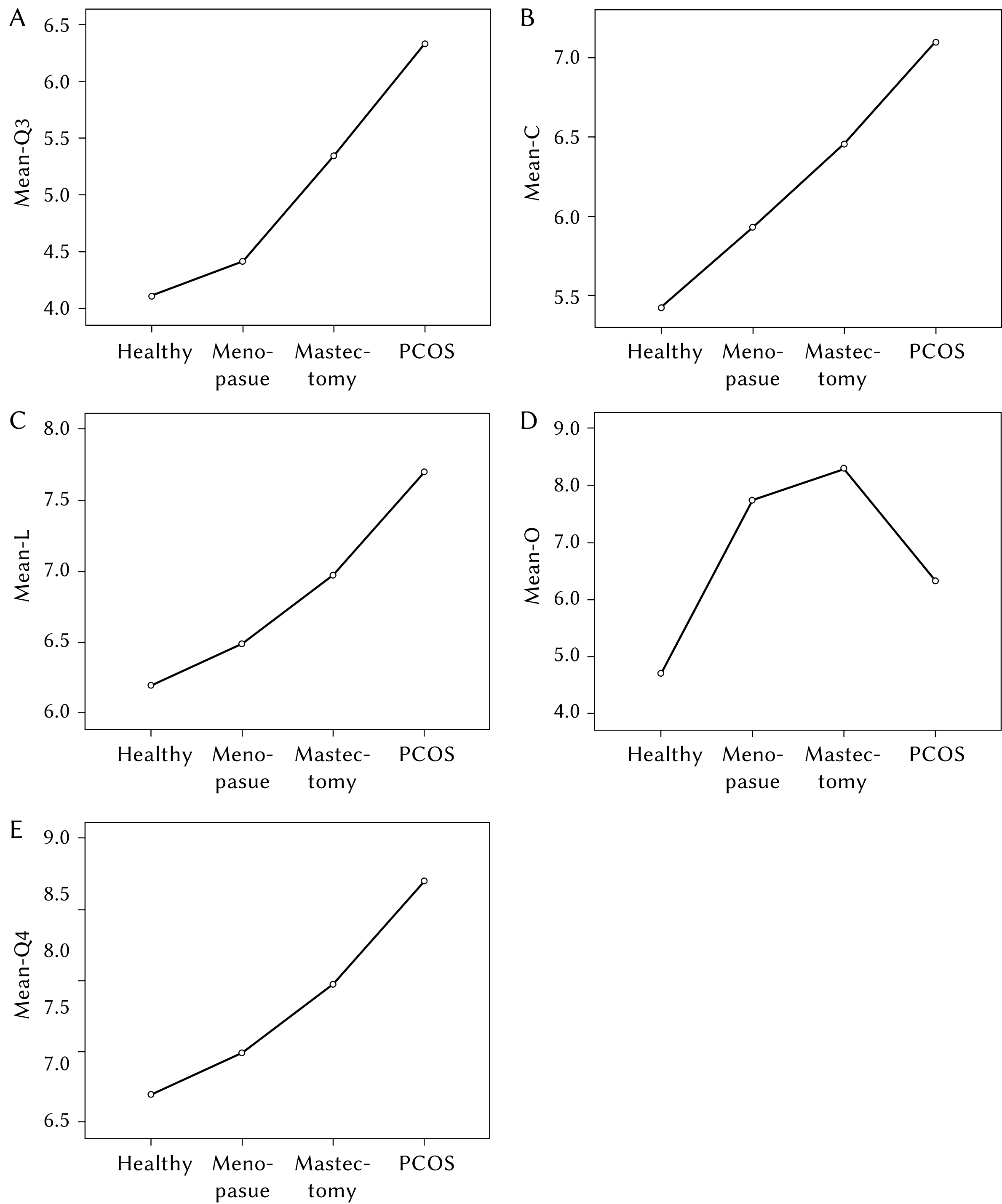

Figure 2. Group means for Anxiety Scale (source: own elaboration).

such as breast cancer. It may indicate the fact that being currently in a situation threatening important values is related to destabilization of their structure. Women after mastectomy examined a year after mastectomy have time to work out their values in the context of the health situation and threats resulting from it; hence they experience a significantly lower crisis which is comparable to the healthy group. Merely in the feeling of disorganization of valuation they are slightly closer to women with PCOS, which may suggest that they still find themselves in the situation where they cannot organize a new value hierarchy completely, maybe due to anxiety related to the further course of disease and concern about its recurrences.

It is also worth noting that there are no significant differences in the experienced value crisis between women after mastectomy and healthy women. Analyzing the means it can be observed indeed that out of these three other groups the *post-hoc* test in-

Table 3

Correlation coefficients between value crisis and anxiety among examined groups

Value Crisis	Anxiety				
	Q3	C	L	O	Q4
			Healthy		
H	.35*	.38*	.23	.40**	.27
Z	.41**	.31	.42**	.53**	.38*
D	.29	.26	.26	.50**	.29
R	.52**	.47**	.36*	.52**	.40*
			PCOS		
H	.41**	.16	.09	.37*	.29
Z	.53**	.53**	.06	.46**	.34*
D	.59**	.22	.06	.37*	.21
R	.71**	.22	.06	.45**	.25
			Menopause		
H	.38*	.32*	.53**	.46**	.42**
Z	.45**	.36*	.56**	.55**	.48**
D	.42**	.18	.39*	.23	.35*
R	.37*	.37*	.39*	.32*	.27
			Mastectomy		
H	.16	.32	.40	.50*	.43
Z	.18	.35	.53*	.69**	.59**
D	.29	.28	.19	.29	.09
R	.50*	.60**	.19	.49*	.24

Note. $^{*}p < .05$; $^{**}p < .01$; other definitions as in previous tables.

dicates only lack of significance of these differences (compare Table 1 and Figure 1). So it can be said that around one year after mastectomy is sometimes enough to have the value crisis generally solved.

Probably it is connected with the phenomenon of posttraumatic growth (Ogińska-Bulik, 2013). Women in menopause do not experience the crisis, either, treating this time like a norm and another stage of life they have to cope with (see also Bielawska-Batorowicz, 2006). Perhaps it is related to the fact that women both after mastectomy and in the menopause period are at the mature age and their values are checked within the life and quite stable, which means that they do not experience strong crises in this range. The group of healthy women includes young women who certainly were not in a situation which could lead to experiencing the crisis connected to values.

The question also occurs if, in fact, there is no crisis or if it is one of the defensive strategies of the ego. Previous studies (Mącik et al., 2011; Mącik & Ziółkowska, 2012) show that a generally positive way of self-esteem of women after mastectomy may be comprehend as defense of *self* against worsening of the self-esteem. On the other hand, the phenomenon of posttraumatic growth (Ogińska-Bulik & Juczyński, 2010; Ogińska-Bulik, 2013), which manifests itself, among other things, in a greater appreciation for oneself and one's life, is mentioned; perhaps beliefs have occurred here which result from such growth; however, this requires more precise research.

Another tested variable was the level of experienced anxiety according to Raymond Cattell. The results of the conducted analysis show again significant differences in this range (Table 2).

Women suffering from PCOS experience much greater anxiety than healthy women in each of its dimensions. It is an understandable situation considering that the examination took place in the hospital and women themselves were in a great uncertainty. How-

ever, the comparison of women suffering from PCOS with women in menopause indicates that they have admittedly worse self-esteem (Q3), slightly lower integration of ego (C) and are definitely more suspicious and distrustful (L), yet they do not differ from them in respect of tension (Q4), while guilt proneness is much lower (O). With reference to the group of women after mastectomy we can basically talk about a similar level of anxiety except the significantly higher factor of guilt proneness in women after the operation.

It can be assumed that there is a definitely higher level of anxiety in women with PCOS in relation to young, healthy women, but in their feeling they are close to the level of anxiety presented by women after mastectomy. It means that polycystic ovary syndrome can lead to a level of anxiety similar to the one in a life-threatening disease. Meanwhile, while anxiety and concern in the case of mastectomy are commonly talked about (Stępień, 2007), in women with PCOS they are talked about less, which is why there is a lack of adequate psychological care. On the other hand, stress leads to the rise in difficulty in getting pregnant, increasing at the same time the intensity of PCOS symptoms (Nowotnik, 2012).

It is worth paying attention to the fact that guilt proneness (O) and internal tension (Q4) are higher in women after mastectomy. Guilt proneness, which includes guilt, anger at oneself, and worrying, in women after the operation indicates their search for their guilt for the disease occurrence (perhaps connected with negligence of the preventive treatment) and, as such, it is quite understandable. However, occurrence of polycystic ovary syndrome cannot be influenced, so guilt proneness is definitely smaller. Such a high index of guilt proneness in women in menopause is interesting indeed. Perhaps it is connected with an unsolved or delayed midlife crisis (half of life) and taking stock of life and its potentially negative result (Kubacka-Jasiecka, 2014). Numerous studies also show a higher tendency to depressive mood of women in this time whose essential symptom is increased guilt (Sprawka et al., 2008; Sobieszczańska, Połać, & Stetkiewicz, 2009).

To sum up the above comparisons, it can be said that women suffering from PCOS are considered much more worried than in the case of other situations of "loss of femininity"; they assess themselves negatively, show weakness of self, which is related to a poor emotional control and low frustration tolerance; they are also suspicious and have a higher tendency to hold other people responsible for their failures. They are characterized by internal tension resulting mainly from *super-ego* expectations (perhaps identified with social expectations?). However, they are not prone to impute guilt to themselves for a situation they are in. However, this situation is even more difficult, as it leads to the occurrence of a relatively strong crisis in valuation. Hence, the conclusion can be drawn that women with PCOS tolerate worse a situation of diagnosis and future uncertainty connected with it than women after mastectomy who have ensured support in various support groups or the support of psycho-oncologists. So, this problem is also worth paying attention to (Dokras, 2012; Niemi, 2013; Stefanaki et al., 2014).

It was also decided to evaluate the relationships between analyzed variables in individual groups – if dependence between concern and value crisis is similar or if these groups differ from one another. The analysis of the correlation coefficients presented in Table 3 indicates that relationships having a significant value are at an average and high level, so one cannot talk about their randomness.

Analyzing correlations in groups, diversity of their number is identifiable – the most relationships between anxiety and valuation occur in the group of women in menopause where almost all relationships are significant, and in the group of healthy women. In the groups of ill women (PCOS and mastectomy) there are definitely fewer relationships. Such distribution of existing relationships indicates the fact that in the case of disease or another health problem anxiety is a result of not only breakdown of the value hierarchy (and, on the other hand, crisis is experienced not only due to the weakness of self) but also other factors, and therefore the number of correlations is smaller. Moreover, it seems that women after mastectomy do not live through the value crisis with such intensity as women with polycystic ovary syndrome because in the case of life threat and considerable health detriment, the value hierarchy is established quickly and health value takes an important role (Walęcka, 2003). The importance of the presence and strength of possible posttraumatic growth is worth considering here.

In the group of women with PCOS there are slightly more of these relationships in comparison with women after mastectomy, but the value processes are of greater significance. The basic value of health and life is not threatened, but other values such as family, partnership, and self-realization were questioned (Nowotnik, 2012). The process of organizing the hierarchy and concern about the possibility of realizing values may contribute to the intensification of anxiety. However, it seems that also the fact of the research situation (hospital, diagnostics) moderates anxiety; therefore, there is a slightly smaller number of observed correlations.

The most relationships can be observed in the group of women in menopause. They do not experience significant health or social problems which could influence the value crisis; it was not outlined in this group (Table 1). Meanwhile, it can be clearly observed that the greater the experience of problems with valuation, the stronger is the outline of individualistic features of anxiety. In the context of above discussed groups of women, it is possible to state that menopause is such a stage in which observed depen-

dencies result directly from one another, not from external factors.

It should also be remembered that the correlation coefficient itself does not inform about the order of occurrence of the analyzed phenomena but only about the strength of dependence. So, when interpreting the obtained results, the two-directional hypothesis should be stated: the value crisis can cause intensification of features of anxiety, but also weakness of "self", reflected in individualistic anxiety, may lead to difficulties in the range of valuation. In fact, both directions probably strengthen each other mutually.

Analyzing obtained indexes of relationships, attention should be paid to those which have the strongest connections to one another. Among factors of anxiety, factors O (guilt proneness) and Q3 (small internal integration and low self-esteem) (groups except mastectomy) have the strongest relations with valuation in all groups. It means that value problems are characteristic for weaker people with lower self-esteem, prone to worry, with a great discrepancy between the real and ideal self, and related to guilt. They are people of lower maturity who due to difficulties in self-esteem and achievement of aims also have difficulties in assessment of what is important in their lives.

On the other hand, the greater the anxiety, the greater the feeling of value unrealization; it is the feature basically characteristic for all compared groups. This indicates strongly the fact that when examined women experience the feeling that they are unable to achieve values which are important for them, it worsens their mood, causing the increase in anxiety. In the case of healthy women and women in menopause, value unrealization leads to the increase of all factors of anxiety, in women after mastectomy increases negative self-esteem, weakens the strength of self and increases guilt proneness, whereas in women with PCOS it lowers self-esteem and increases guilt proneness.

It is worth noting that the relation between values unrealization and negative self-esteem (Q3) in women with polycystic ovary syndrome has the highest of obtained values which is assessed as high. It indicates how much potential inability to achieve the values connected with having babies and family is related to negative self-esteem. This self-esteem is often confirmed in social opinions (Nowotnik, 2012; Zachurzok et al., 2014). The second dimension of crisis strongly related to anxiety is the sense of value loss, the conviction that we do not know what is important in life, especially when the value which was important cannot be achieved.

CONCLUSIONS

The aim of the conducted research was to show if and to what extent polycystic ovary syndrome is connected with experiencing the crisis in processes of valuation and increased feeling of anxiety in women suffering from PCOS. Because, as it was shown at the beginning, the threat of infertility is related to inability to realize an important aspect of femininity which is having an offspring but also other determinants of femininity (unfavorable changes in a physical appearance), it was decided to compare experiences of these women with other women's problems: menopause (lack of ability to get pregnant, unfavorable changes in appearance, changes in sexual activity related to hormonal changes) and a radical therapy of breast cancer in the form of mastectomy (breasts are treated as an important determinant of femininity not only for women but also for their partners). As a control group, young, healthy women were examined.

Women after mastectomy and in menopause have a higher guilt proneness (significant difference in relation to menopause) than women with PCOS; women after mastectomy also have a higher index of tension than PCOS. All of these groups (except healthy women) have raised indexes of anxiety. PCOS is then an anxious situation for women, indeed, even in reference to the situation of already undergone mastectomy. Focusing on themselves, lowering self-esteem, low self-esteem, low frustration resistance but also suspiciousness and distrust are characteristic for these women. Many of these features seem to be related to perceived threat of realization of the role of mother and social assessment connected to this.

In turn, women after mastectomy, most of all, are characterized by guilt proneness (for health negligence? lack of self-control?), difficulties in concentration, focusing on difficulties; they are similar to the women in menopause in this aspect. Mastectomy is also clearly related to a high level of internal tension which probably results from the "unspecified" state in which they are: already not ill or not considered recovered yet.

In the value crisis women with PCOS have the highest indexes in relation to healthy women and other groups. It can be noted that they are characterized most of all by difficulty in hierarchical organization of values – they are not able to evaluate what is more important for them, and what is less important; there is a lack of principal value orientation. They have the feeling that their value system needs to be thought over; a part of values is no longer valuable, while others gain significance. They are lost in it and have the feeling that they are not able to realize values. It also happens that on a declarative level other values are important than values accepted on an emotional level, which causes system disintegration and lack of integrity leads to value unrealization.

Of course the obtained results, except giving essential information, pose other questions. It should be tested more precisely where such a high level of

anxiety and concern in the group of women with PCOS is from. Perhaps it results from the situation of diagnosis, social reactions, medical procedures or other factors which are not related to the value crisis. To what extent is the value crisis connected with the situation and to what extent with changes in the course of life? Which values are significant and what do changes in the value crisis look like? What is the internal strength of women and the structure of their personality? The need to clarify these variables designates the direction for further research.

References

Açmaz, G., Albayrak, E., Acmaz, B., Başer, M., Soyak, M., Zararsız, G., & IpekMüderris, I. (2013). Level of anxiety, depression, self-esteem, social anxiety, and quality of life among the women with polycystic ovary syndrome. *Scientific World Journal*, 851815. doi: 10.1155/2013/851815

Bidzan, M. (2010). *Niepłodność w ujęciu bio-psycho--społecznym* [Infertility: a biopsychosocial approach]. Kraków: Impuls.

Bidzan, M., Podolska, M., Bidzan, L., & Smutek, J. (2011). Cechy osobowościowe a poczucie osamotnienia kobiet leczonych z powodu niepłodności [Personality traits and the feeling of loneliness of women treated for infertility]. *Ginekologia Polska, 82*, 508–513.

Bielawska-Batorowicz, E. (2006). Stres, objawy i przekonania dotyczące menopauzy a obniżony nastrój u kobiet w wieku 45–55 lat. Próba weryfikacji zmodyfikowanego psychospołecznego modelu depresji w okresie okołomenopauzalnym [Stress, symptoms and opinions on menopause in relation to depressed mood in women aged 45-55 years. An analysis within the framework of modified psychosocial model of menopausal depression]. *Przegląd Menopauzalny, 2*, 68–74.

Cinar, N., Kizilarslanoglu, M. C., Harmanci, A., Aksoy, D. Y., Bozdag, G., Demir, B., & Yildiz, B. O. (2011). Depression, anxiety and cardiometabolic risk in polycystic ovary syndrome. *Human Reproduction (Oxford, England), 26*, 3339–3345.

Deeks, A. A., Gibson-Helm, M. E., Paul, E., & Teede, H. J. (2011). Is having polycystic ovary syndrome a predictor of poor psychological function including anxiety and depression? *Human Reproduction, 26*, 3339–3407. doi: 10.1093/humrep/der071

Dokras, A., Clifton, S., Futterweit, W., & Wild, R. (2012). Increased prevalence of anxiety symptoms in women with polycystic ovary syndrome: systematic review and meta-analysis. *Fertility and Sterility, 97*, 225–230.

Elsheikh, M., & Murphy, C. (2011). *Zespół policystycznych jajników* [Polycystic ovary syndrome]. Warszawa: Wydawnictwo Lekarskie PZWL.

Guglas, N., Mackiewicz, J., Pawlik, P., & Cichy, W. (2007). Aspekty psychologiczne raka piersi u kobiet w okresie menopauzy [Psychological aspects of breast cancer for women during the menopause]. *Przegląd Menopauzalny, 1*, 19–22.

Guilford, J. P. (1960). Podstawowe metody statystyczne w psychologii i pedagogice [Basic statistical methods in psychology and pedagogy]. Warszawa: Wydawnictwo Naukowe PAN.

Jakubowski, L. (2005). Genetic aspects of polycystic ovary syndrome. *Endokrynologia Polska, 56*, 285–291.

Katulski, K., & Męczekalski, B. (2012). Hirsutism – medical and cosmetic point of view. *Archives of Perinatal Medicine, 18*, 81–85.

Kubacka-Jasiecka, D. (2014). *Doświadczenie menopauzy a kryzysy biegu życia w okresie dorosłości* [The experience of menopause and crises of course of life in adulthood]. Referat wygłoszony podczas I Krajowej Konferencji Psychologii Klinicznej: Psychologia kliniczna w XXI wieku – teoria i praktyka [The 1st National Conference in Clinical Psychology: Clinical Psychology in the XXI century - Theory and Practice]. Poznań: Uniwersytet Adama Mickiewicza.

Łazowski, J., & Płużek, Z. (1982). Program własnych badań [Research method]. In: J. Łazowski (ed.), Problemy psychosomatyczne w chorobie wrzodowej żołądka i dwunastnicy [Psychosomatic problems in gastric and duodenal ulcer disease] (pp. 64–106). Warszawa: PZWL.

Makara-Studzińska, M., & Wdowiak A. (2008). Psychologiczna sytuacja kobiety niepłodnej [The psychological situation of the infertile woman] In: M. Makara-Studzińska, & G. Iwanowicz-Palus (eds.), *Psychologia w położnictwie i ginekologii* [Psychology in obstetrics and gynecology]. Warszawa: Wydawnictwo Lekarskie PZWL.

Mącik, D., & Ziółkowska, P. (2012). Sytuacje postrzeganej utraty kobiecości: menopauza i mastektomia – zmiany w obrazie siebie jako kobiety [Situations connected with perceived loss of femininity: menopause and mastectomy – changes in perceiving oneself as a woman]. *Przegląd Menopauzalny,* 6, 456–462.

Mącik, D., Ziółkowska, P., & Kowalska, M. (2011). Self-perception of women after mastectomy as an ego defense mechanism. Comparison with a group of healthy women. *Contemporary Oncology, 16*, 184–190.

Niemi, R. (2013). *PCOS T.A.C.T.: A program to assist psychologists in understanding and helping women diagnosed with polycystic ovary syndrome.* ProQuest Information & Learning, US.

Nowotnik, A. (2012). Wielkowymiarowość doświadczenia zespołu policystycznych jajników u kobiet w wieku rozrodczym: przegląd badań [PCOS experience multidimensionality among women

of reproductive age: A research review]. *Nowiny Lekarskie, 81*, 268–272.
Ogińska-Bulik, N., & Juczyński, Z. (2010). Rozwój potraumatyczny – charakterystyka i pomiar [Posttraumatic growth – characteristic and measurement]. *Psychiatria, 7*, 129–142.
Ogińska-Bulik, N. (2013). The role of social support in posttraumatic growth in people struggling with cancer. *Health Psychology Report, 1*, 1–8. doi: 10.5114/hpr.2013.40464
Oleś, P. (1998). Kwestionariusz do Badania Kryzysu w Wartościowaniu [Value Crisis Questionnaire]. Warszawa: Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego.
Pawlikowski, M. (2003). Zaburzenia hormonalne [Hormonal disorders]. Warszawa: Wydawnictwo Lekarskie PZWL.
Sobieszczańska, S., Połać, I., & Stetkiewicz, T. (2009). Syndrom Gauguina u kobiet w okresie przejścia menopauzalnego [Gauguin syndrom in women in menopausal transition]. *Przegląd Menopauzalny, 6*, 324–326.
Specjalski, R. (2013). Zaburzenia psychoseksualne u kobiet z zespołem policystycznych jajników [Psychosexual disorders in women with polycystic ovary syndrome]. *Pielęgniarstwo Polskie, 3*, 230–234.
Sprawka, K., Wysokiński, A., Orzechowska, A., Talarowska-Bogusz, M., Typel, D., & Gruszczyński, W. (2008). Zaburzenia depresyjne i lękowe w okresie klimakterium [Depressive and anxiety disorders in menopause]. *Psychiatria, 5*, 99–103.
Stefanaki, C., Bacopoulou, F., Livadas, S., Kandaraki, A., Karachalios, A., Chrousos, G. P., Diamanti-Kandarakis, E. (2014). Impact of a mindfulness stress management program on stress, anxiety, depression and quality of life in women with polycystic ovary syndrome: a randomized controlled trial. *Stress (Amsterdam, Netherlands),* 1–34.
Stępień, R. B. (2007). Uwarunkowania społeczno-demograficzne poziomu lęku i depresji u kobiet po radykalnym leczeniu chirurgicznym raka piersi – mastektomii [Socio-demographic determinants of anxiety and depression levels of women after radical surgical treatment for breast cancer – mastectomy]. *Problemy Pielęgniarstwa, 15*, 20–25.
Tatarchuk, T., Voronenko, N., Ganzhiy, I., & Burlaka, O. (2013). Assessment of the quality of life for women with Polycystic ovary syndrome on the background of overweight. *Journal of Health Sciences, 3*, 357–364.
Walęcka, K. (2003). *Sytuacja społeczno-psychologiczna kobiet po operacji raka piersi* [Socio-psychological situation of women after breast cancer surgery]. Retrieved from: http://dspace.uni.lodz.pl:8080/xmlui/handle/11089/3494
Zachurzok, A., Gawlik, A., Nowak, A., Drosdzol-Cop, A., & Małecka-Tendera, E. (2014). Social abilities and gender roles in adolescent girls with polycystic ovary syndrome – a pilot study. *Endokrynologia Polska, 65*, 189–194.