

Sense of coherence in women diagnosed with breast cancer as key to health

Poczucie koherencji u kobiet z rozpoznaniem nowotworem piersi kluczem do zdrowia

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Wprowadzenie. Na kształtowanie poczucia koherencji mają wpływ zasoby odpornościowe (właściwości jednostki: biologiczne, psychologiczne) i doświadczenia życiowe jednostki.

Cel. Określenie różnic w poczuciu koherencji kobiet leczonych z powodu nowotworu piersi i kobiet zdrowych oraz ocena wpływu wieku, stanu cywilnego i czasu trwania choroby na poziom komponentów poczucia koherencji.

Materiały i metody. Badaniem objęto 109 (55,6%) kobiet z rozpoznaniem nowotworem piersi (grupa 1) i 87 (44,4%) kobiet zdrowych (grupa 2). Zastosowano Kwestionariusz Orientacji Życiowej SOC-29 (Questionnaire of Life Orientation SOC-29) Aarona Antonovsky'ego. Zebrany materiał empiryczny poddano analizie statystycznej.

Wyniki. W grupie kobiet chorych wartości globalnego poczucia koherencji były istotnie statystycznie niższe, niż w grupie kobiet zdrowych. Wykazano, że poczucie koherencji było istotnie niższe wśród chorych niż zdrowych w komponentie zrozumiałości ($p < 0,001$). Zaradność ($p < 0,002$) i sensowność ($p < 0,05$) były ocenione na wyższym poziomie w grupie chorych. Czas trwania choroby istotnie ($p < 0,02$) determinował poczucie zaradności. Owdowiata chore miały istotnie niższe ($p < 0,001$) poczucie zrozumiałości i istotnie wyższe ($p < 0,02$) zaradności, a pozostające w związku małżeńskim charakteryzowały się istotnie wyższym ($p < 0,02$) poczuciem sensowności w stosunku do kobiet zdrowych.

Wnioski. Kobiety z nowotworem piersi charakteryzowały się niższym poczuciem koherencji globalnej oraz niższym poczuciem koherencji w wymiarze zrozumiałości. Osiągnęły wyższe wyniki w wymiarze zaradności i sensowności w porównaniu z kobietami zdrowymi.

Słowa kluczowe: poczucie koherencji, zrozumiałość, zaradność, sensowność, nowotwór piersi

Introduction. Individual immunological resources (biological and psychological features) and individual life experiences affect the formation of the sense of coherence.

Aim. To determine differences in the sense of coherence in women treated for breast cancer and healthy women and to assess the effects of age, marital status and duration of the disease on the sense of coherence.

Material & Method. The study was conducted on 109 (55.6%) women diagnosed with breast cancer (group 1), and 87 (44.4%) healthy women as the control group (group 2). Random selection was used. For the measurement of the variables an abbreviated version of the Questionnaire of Life Orientation SOC-29 Aaron Antonovsky was used. The collected empirical data was statistically analyzed.

Results. In group 1 a global sense of coherence was significantly lower than in the healthy women group. It has been shown that the sense of comprehensibility ($p < 0.001$) was significantly lower in group 1 than in the healthy women. The sense of resourcefulness ($p < 0.002$) and meaningfulness ($p < 0.05$) were higher in the ill women group than in the healthy women. The disease duration significantly ($p < 0.02$) determined the sense of resourcefulness. The widowed patients had a significantly lower ($p < 0.001$) sense of comprehensibility and a higher ($p < 0.02$) sense of resourcefulness and the married ones had a significantly higher ($p < 0.02$) sense of meaningfulness in relation to the healthy women.

Conclusion. The women with breast cancer had lower global sense of coherence and lower sense of comprehensibility. They showed higher scores in the resourcefulness and meaningfulness dimension in comparison to the healthy women.

Key words: sense of coherence, comprehensibility, resourcefulness, meaningfulness, breast cancer

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Introduction

The origins of the concept of salutogenesis and sense of coherence (SOC) date back to the 1970s, and breakthrough studies were conducted by Aaron Antonovsky in Israel, on the life of women from dif-

ferent ethnic groups during menopause. Antonovsky compared the health of women who were affected by traumatic experiences at the concentration camp with the control group. The results of the research led Antonovsky to further questions about the source of

health and in the further course of research, to answer the question: how and why a strong sense of coherence promotes health? [1]. Antonovsky formulated his concept of salutogenesis, which proposes the inclusion of health and disease as a continuum, where the current place of an individual depends on the strength of their sense of coherence [2]. The sense of coherence is determined by Antonovsky as “a global orientation of man, expressing the degree to which the man is dominant, persistent, though dynamic feeling of confidence that the stimulus flowing over the life of the internal and external environment are structured, predictable and explicable; resources are available, which will allow him to meet the demands posed by these stimuli; These requirements are a challenge for him worth the effort and commitment” [1-3]. The sense of coherence consists of three components: comprehensibility, resourcefulness, meaningfulness. Their formation is affected by the immunity resources and life experiences [3]. Intelligibility as a cognitive aspect refers to the degree to which a person perceives stimuli with which they come into contact, coming from internal and external environment in a sufficiently structured way, to be able to anticipate events, explain, give them a cognitive sense. A person with a strong sense of comprehensibility expects the stimuli which they get in the future will be predictable stimuli or, in the worst case scenario, that if a stimulus surprises them, they will be able to assign it to something and explain it [2, 4, 5]. The sense of comprehensibility is the ability to understand the surrounding world [4, 6]. Antonovsky defined the sense of resourcefulness as the degree to which a person perceives available means as sufficient to allow them to cope with the requirements of any situation. A person with a strong sense of resourcefulness does not feel a victim of fate, nor has a sense that life is treating them unfairly. The reasonableness is the degree to which a person feels that life has meaning, defines emotional–motivational attitude towards the upcoming events, expresses confidence that the requirements of the situation are worth engagement and effort [2, 4, 5]. Research shows that a strongly developed sense of coherence mobilizes human activity, this is probably due to a sense of meaningfulness. Resources and competences that enable reduction in the action of stressors are engaged. This mechanism allows to better cope with the requirements of life [4, 7]. SOC serves as the main variable in the process of achieving, protecting and restoring health. Differences in the sense of coherence may arise from the nature of the disease [8, 9]. Antonovsky believes that a strong sense of coherence promotes better acceptance of the disease and the limitations of the disease and therapy, better functioning during the disease and the effort to overcome the disease finds its existence in a happy ending [3, 9, 10]. The most common cancer occurring

in women in Poland is breast cancer. Many scientific reports indicate that the type of the treatment determines the quality of life of women. The basic method of treatment is mastectomy – surgery very tough mentally, with negative consequences in the psychological functioning [11-13]. Olszewski and Szczukiewicz showed that “there is a relationship between basic personality traits and ways of coping with stress used by women after mastectomy and those not affected by cancer” [13]. On the other hand, other authors have shown that women who have undergone mastectomy have a lower sense of coherence in relation to patients after conserving treatment. Also, complementary therapy used in women treated for breast pathology, significantly lowers their sense of coherence [14]. An important factor affecting the quality of life of women after mastectomy and their level of coherence is the age at which cancer was diagnosed. Mor, et al. found that women under 55 years of age experienced breast cancer more negatively on an emotional level and in the perception of their financial situation as compared to women over 55 years of age [14, 15]. In a study conducted by Kurowska and Balas in the group of 100 women treated with the Madden method mastectomy stated “the average level of coherence. The best results related to the sense of resourcefulness/controllability and comprehensibility, and the worst – reasonableness. Patients showed an average level of acceptance of the disease. The highest scores on the acceptance of the disease have been reached by those women who achieved high scores in terms of a sense of resourcefulness/controllability, comprehensibility and meaningfulness” [16].

Aim

To determine differences in the sense of coherence in women treated for breast cancer and healthy women and to assess the effects of age, marital status and the disease duration on the level of sense of coherence components.

Material and method

The study was conducted in 2015 in healthcare centers and the ‘Amazon clubs’ in north-eastern region of Poland. Random selection was used. 109 women diagnosed with breast cancer were qualified to group 1. In order to perform a comparative analysis 87 healthy women were qualified to group 2 – as the control group. The study was conducted in full compliance with ethical standards. The survey was anonymous, the respondents were informed of the purpose of the study, had the opportunity to ask questions and to seek clarification. All women included in the survey gave their informed consent to participate in the study. For the measurement of the

variables a questionnaire containing questions of own design about basic socio-demographic and medical data was used. To estimate the SOC an abbreviated version of Aaron Antonovsky's Questionnaire of Life Orientation SOC-29 was used. The questionnaire contains 29 questions that relate to the assessment of three-dimensional sense of coherence (subscales): comprehensibility (11 questions), resourcefulness (10 questions), meaningfulness (8 questions). The respondents gave answers in a 7-point scale (score range 1-5). The maximum attainable score in the questionnaire providing a global sense of coherence is 203 points, while the lowest 29 points. The higher the score, the stronger the sense of coherence [17]. Descriptive analysis was used to evaluate the results – measurable parameters were characterized by giving the mean value and standard deviation and the parameters were measurable by the multiplicity and frequency of respondents in the classrooms. To evaluate the differences in the average age the t-test was used. Quantitative variables were checked with the chi-square test (χ^2) and to assess the diversity of the medium studied traits classes grouping variables the U-Mann-Whitney's test was used. The Kruskal-Wallis test was also used. The level of significance was $p=0.05$. Statistical analysis was performed using the Statistica 10 software.

Results

The study included 196 women, 109 (55.6%) female patients diagnosed with breast cancer and 87

(44.4%) healthy women. The average age in the group of female patients was 59.70 ± 9.33 years, while in the group of healthy women 58.69 ± 8.07 years; no significant differences between groups ($t=0.79$; $p<0.43$). The largest group of all respondents were women aged 61-70 years ($n=75$; 38.3%) and 51 to 60 years ($n=70$; 35.7%). Among the women diagnosed with breast cancer more than half (56.0%) were married, and 5 women reported widowhood (20.2%). Most of the respondents had secondary education, and more than three-quarters lived in the city. A large group of women ($n=45$; 41.0%) was struggling for a few months with cancer, 31.0% ($n=34$) overcame the disease in six years or longer. The majority of sick women had stated 'yes' ($n=76$; 69.7%) and 'rather yes' ($n=28$; 25.7%) that they were receiving support from family, and more than half ($n=58$; 53.0%) used institutional support. As many as three-quarters ($n=84$) of the respondents reported that in addition to cancer they struggled with other diseases, the most frequently mentioned were: hypertension ($n=50$), diabetes ($n=23$), coronary artery disease ($n=14$). Table I contains a detailed description of the respondents.

The analysis shows that in group 1 the global sense of coherence was at the level of $M=128.17$; $SD=18.92$; $Me=127.00$ and was significantly lower than in the healthy women group ($M=129.18$, $SD=8.28$, $Me=131.00$). The variation of mean values for the individual components making up the global sense of coherence (i.e. comprehensibility, manageability, meaningfulness) in subgroups of women

Table I. Respondents' description
Tabela I. Charakterystyka badanych

| Variables /Zmienne | | breast cancer patients /kobiety chore n=109 (%) | healthy women /kobiety zdrowe n=87 (%) | p |
|---|-------------------------|--|---|---------------|
| age [in years] /wiek [w latach] | M±SD | 59.70±9.33 | 58.69±8.07 | t=0.79 |
| | Me | 60 | 58 | p<0.43 |
| | ≤50 | 21 (19.3) | 15 (17.2) | |
| | 51-60 | 35 (32.1) | 35 (40.2) | $\chi^2=1.40$ |
| | 61-70 | 44 (40.4) | 31 (35.6) | p<0.71 |
| marital status /stan cywilny | >70 | 9 (8.2) | 6 (7.0) | |
| | single /panna | 14 (12.8) | 8 (9.2) | |
| | married /zameżna | 61 (56.0) | 63 (72.4) | $\chi^2=7$ |
| | widow /wdowa | 22 (20.28) | 13 (14.9) | p<0.06 |
| education /wykształcenie | divorced /rozwiedziona | 12 (11.0) | 3 (3.5) | |
| | primary /podstawowe | 8 (7.3) | 1 (1.2) | |
| | vocational /zawodowe | 18 (16.5) | 19 (21.8) | $\chi^2=5.35$ |
| | secondary /średnie | 64 (58.7) | 48 (55.2) | p<0.14 |
| financial situation /sytuacja finansowa | higher /wyższe | 19 (17.5) | 19 (21.8) | |
| | very good /bardzo dobra | 18 (16.5) | 15 (17.2) | |
| | good /dobra | 46 (42.2) | 47 (54.0) | |
| | sufficient /dostateczna | 31 (28.4) | 19 (21.8) | $\chi^2=5.33$ |
| | poor /słaba | 11 (10.19) | 3 (3.5) | p<0.25 |
| | very poor /bardzo słaba | 3 (2.8) | 3 (3.5) | |

patients and healthy subjects was evaluated in the further study (Table II).

The analysis of the first cognitive dimension specifying the sense of comprehensibility brought mixed results. It showed that a sense of comprehensibility was significantly ($p < 0.001$) lower in the cancer patients than in the healthy subjects. The second cognitive-instrumental dimension which refers to a sense of resourcefulness – controllability stems from the belief that we have access to the resources needed to cope with the situation. As a result of the analysis it was found that the sense of resourcefulness was statistically significantly ($p < 0.002$) higher in the cancer patients group than in the control group. The third dimension of SOC defined as meaningfulness is a motivational-emotional component, which means that it plays a significant role in the fight against the

disease. The sense of meaningfulness was statistically significantly ($p < 0.05$) higher in the cancer patients than in the healthy women group. The further part of the analysis showed the effect of two variables: age and marital status on each dimension of the sense of coherence in the cancer patients group and the group of healthy women. Summary results of the significance of differences/dependence obtained by two distinguished groups are presented in Tables III and IV. As it can be seen from the analysis, the sense of comprehensibility was determined by the age of the respondents in three age classes. The cancer patients had a significantly lower sense of comprehensibility in the group under 50 years of age ($p < 0.002$), 51-60 ($p < 0.001$) and 61-70 ($p < 0.001$) than in the control group. In contrast, a sense of resourcefulness was determined by the age variable only in the age group

Table II. Characteristics of specific dimensions of sense of coherence by SOC-29 questionnaire
Tabela II. Charakterystyka wymiarów poczucia koherencji wg kwestionariusza SOC-29

| Descriptive statistics /Statystyki opisowe | Dimensions of sense of coherence /Wymiary poczucia koherencji | | | | | |
|---|---|----------------------------------|--|----------------------------------|--|----------------------------------|
| | comprehensibility /zrozumiałość | | resourcefulness /zaradność | | meaningfulness /sensowność | |
| | breast cancer patients /kobiety chore | healthy women /kobiety zdrowe | breast cancer patients /kobiety chore | healthy women /kobiety zdrowe | breast cancer patients /kobiety chore | healthy women /kobiety zdrowe |
| N | 109 | 87 | 109 | 87 | 109 | 87 |
| M±SD | 47.08±9.93 | 55.23±5.76 | 44.73±8.42 | 39.37±2.38 | 36.35±6.08 | 34.59±2.63 |
| Me | 47.00 | 57.00 | 42.00 | 40.00 | 36.00 | 35.00 |
| min-max | 17-67 | 38-64 | 25-68 | 31-44 | 17-54 | 29-42 |
| U-Mann Whitney's | U=-2263.5; $p < 0.001$ | | U=2880; $p < 0.002$ | | U=3945; $p < 0.05$ | |

Table III. Level of sense of coherence in treatment groups by age – comparison
Tabela III. Porównanie poziomu poczucia koherencji w grupach badanych z uwzględnieniem wieku

| Variables /Zmienne | | Age [in years] /Wiek [w latach] | | | | |
|---|---------------------------------------|---------------------------------------|-------|-------|-------|-------|
| | | ≤50 | 51-60 | 61-70 | >70 | |
| SOC Dimensions /Wymiary poczucia koherencji | comprehensibility /zrozumiałość | breast cancer patients /kobiety chore | 46.62 | 45.74 | 48.25 | 47.67 |
| | | healthy women /kobiety zdrowe | 55.33 | 56.11 | 55.68 | 47.50 |
| | | p | 0.002 | 0.001 | 0.001 | 1.000 |
| | resourcefulness /zaradność | breast cancer patients /kobiety chore | 42.00 | 43.30 | 47.00 | 45.90 |
| | | healthy women /kobiety zdrowe | 38.40 | 40.03 | 39.55 | 37.00 |
| | | p | 0.06 | 0.77 | 0.001 | 0.07 |
| meaningfulness /sensowność | breast cancer patients /kobiety chore | 35.3 | 36.3 | 36.7 | 37.2 | |
| | healthy women /kobiety zdrowe | 34.40 | 35.29 | 34.71 | 30.33 | |
| | p | 0.61 | 0.77 | 0.21 | 0.03 | |

Table IV. Level of sense of coherence in treatment groups by marital status – comparison
Tabela IV. Porównanie poziomu poczucia koherencji w grupach badanych z uwzględnieniem stanu cywilnego

| Variables/Zmienne | | Marital status /Stan cywilny | | | | |
|---|---------------------------------------|---------------------------------------|---------------------|-------------------|--------------------------|-------|
| | | single /panna | married /zameżna | widowed /wdowa | divorced /rozwidziona | |
| SOC Dimensions /Wymiary poczucia koherencji | comprehensibility /zrozumiałość | breast cancer patients /kobiety chore | 51.14 | 47.30 | 45.64 | 43.92 |
| | | healthy women /kobiety zdrowe | 59.00 | 55.08 | 56.85 | 41.33 |
| | | p | 0.05 | 0.001 | 0.001 | 0.39 |
| | resourcefulness /zaradność | breast cancer patients /kobiety chore | 43.00 | 45.54 | 42.91 | 46.00 |
| | | healthy women /kobiety zdrowe | 39.38 | 39.54 | 38.69 | 38.67 |
| | | p | 0.26 | 0.003 | 0.02 | 0.19 |
| meaningfulness /sensowność | breast cancer patients /kobiety chore | 38.64 | 36.49 | 34.36 | 36.58 | |
| | healthy women /kobiety zdrowe | 35.13 | 34.60 | 35.08 | 30.67 | |
| | p | 0.39 | 0.02 | 0.36 | 0.04 | |

of 61-70. The women who were sick and of older age had a significantly higher sense of resourcefulness ($p < 0.001$) than the healthy women. The third component of the sense of coherence – the meaningfulness – was determined by the age of the age group above 70 years, the women diagnosed with breast cancer had a significantly higher sense of meaningfulness ($p < 0.03$) than the healthy women (Table III).

The analysis shows that marital status of the respondents had a statistically significant effect on the sense of comprehensibility, resourcefulness and meaningfulness (Table IV).

Married women diagnosed with cancer had a significantly lower ($p < 0.001$) sense of comprehensibility and a significantly higher ($p < 0.003$) sense of resourcefulness than the healthy women. Also, the widowed sick showed a significantly lower ($p < 0.001$) sense of comprehensibility and a significantly higher ($p < 0.02$) sense of resourcefulness than the healthy women. On the other hand, the married sick women had a significantly higher ($p < 0.02$) sense of meaningfulness than the healthy women. Similarly, the divorced patients also had a significantly higher ($p < 0.04$) sense of meaningfulness than the healthy divorced women. In the rest of study the authors sought to answer the question: “Does the disease duration affect the sense of coherence in all three dimensions in the studied group?”. As it follows from the analysis, the disease duration significantly ($p < 0.02$) determined one of the components of the sense of coherence – a sense of resourcefulness (Table V).

In a detailed analysis the sense of resourcefulness was found to be significantly higher ($p < 0.05$) in the women struggling with the disease for 2 to 3 years than in those who had a shorter or longer period of fight with the disease.

Discussion

The studied groups of women differed in the sense of comprehensibility, resourcefulness, and meaningfulness results and in the overall sense of coherence. It had been shown that the women included in a group

of patients had a lower overall sense of coherence and a lower sense of comprehensibility component as compared to the second group. Other two components of the meaningfulness and resourcefulness were assessed at a higher levels in the patients than in the healthy subjects. The observed differences between the groups were statistically significant. Resourcefulness had a cognitive character, and meaningfulness as the most important element of coherence had an emotional and motivational dimension. This result suggests that women diagnosed with breast cancer have a heightened sense of control over their own lives and have a greater ability to use its resources in comparison with healthy people. In a study conducted by Kenne Sarenmalm and associates in a group of 131 women diagnosed with primary or recurrent breast cancer, a linear relationship between the level of SOC and health and quality of life was demonstrated. The researchers found that the higher rate of SOC occurred in women who led a more active lifestyle, they were more relaxed and diverted attention from the disease. The sick also reported less stressful situations and coped better with difficult situations in life, in contrast to the women with low SOC who did not accept the disease and wanted only spiritual and social support [18]. Similar results were obtained in studies conducted by Gerasimčik-Pulko and associates in Lithuania, in a group of 100 women undergoing therapy for breast cancer. The study authors pointed out that women who had a high sense of coherence were characterized by better emotional functioning, felt less fatigue and pain, recovered faster after mastectomy [19]. On the other hand, Flensburg-Madsen and associates conducted a meta-analysis to determine the relationship between the sense of coherence and various aspects of health. Analyzing more than 50 research papers they formed a notion of a close connection of SOC only to the psychological aspects of health, but the researchers were not able to take a firm position regarding the expected role of SOC as a determinant of health in the physical sense [20]. Many authors indicate that the sense of coherence primarily affects quality of life, rather than its length, so it is not a predictor of women's health,

Table V. Comparison of mean SOC values in women patients by disease duration

Tabela V. Porównanie średnich poczucia koherencji w grupie kobiet chorych z uwzględnieniem czasu trwania choroby

| Disease duration /Czas trwania choroby | breast cancer patients /kobiety chore N=109 | | SOC Dimensions/ Wymiary poczucia koherencji | | | | | |
|---|---|------|---|--------|-------------------------------|--------|-------------------------------|--------|
| | N | % | comprehensibility /rozumiałość | | resourcefulness /zaradność | | meaningfulness /sensowność | |
| | | | M | SD | M | SD | M | SD |
| ≤6 months /miesiący | 45 | 41,3 | 48.93 | 10.16 | 43.38 | 7.79 | 36.11 | 5.48 |
| 7 months /miesiący – 1 year /rok | 13 | 11,9 | 43.92 | 9.64 | 42.31 | 7.13 | 35.46 | 5.58 |
| 2-3 years /lata | 12 | 11,0 | 49.08 | 10.57 | 54.67 | 7.94 | 40.08 | 6.79 |
| 4-5 years /lat | 5 | 4,6 | 41.60 | 12.95 | 39.40 | 10.64 | 34.80 | 2.28 |
| ≥6 years /lat | 34 | 31,2 | 45.94 | 8.8 | 44.74 | 7.25 | 35.91 | 6.89 |
| | Kruskal-Wallis test | | H=4.87 | p<0.30 | H=17.09 | p<0.02 | H=4.42 | p<0.35 |

but the subjective correlative of its perception. It is sensitive to important life events, which anticipate health risks [21-24]. Nilsson and associates demonstrated that a stable value of SOC was shown only by people with initially high SOC and medium and low level would tend to decrease over time due to a variety of psychosocial factors [25]. Other researchers have shown, however, that a variety of traumatic situations affect the sense of coherence in the observation over several years [26]. Analyzing the sense of coherence among women with breast cancer, it is worth noting that according to the Antonovsky's theory, the sense of coherence may vary slightly under the influence of critical life events, such undoubtedly being the oncological life-threatening disease. The assumptions made by Antonovsky emphasize the lack of connection of SOC with the age of adults [3]. However, our study did not confirm this. The authors showed that the sense of comprehensibility was determined by the age of the respondents in three age classes. The women patients had a significantly lower sense of comprehensibility in the age group below 50, 51-60 and 61-70 years of age. On the other hand, women aged 61-70 years had a lower sense of resourcefulness. The third component of the sense of coherence – the sense of meaningfulness – was determined by the age group of patients over 70 years. The women diagnosed with breast cancer had a significantly higher sense of meaningfulness than the healthy women. The authors analyzed the relationship of SOC and its components characterizing the group and showed a varied, statistically significant dependencies in all three dimensions regarding the marital status of the respondents. The married and widowed cancer patients had a significantly lower sense of comprehensibility and a significantly higher sense of resourcefulness than the healthy women. On

the other hand, the unmarried cancer patients had a significantly higher sense of meaningfulness than the healthy women. It was similar in the divorced patients group, they also had a significantly higher sense of meaningfulness than the healthy divorced women. The disease duration is another variable that can determine the sense of coherence and life satisfaction among patients struggling with cancer. Engel and associates performed an interesting long-term post-surgery study in a group of 990 women treated for breast cancer and obtained the results showing an improvement in quality of life over time [27]. In our study, the sense of resourcefulness was significantly higher ($p < 0.05$) in the women who struggled with the disease for 2 to 3 years. In summary, it can be said that the sense of coherence is an important aspect in the treatment and rehabilitation of women suffering from breast cancer.

Conclusion

1. The cancer patients had lower global sense of coherence and lower sense of comprehensibility component as compared to the healthy women. Resourcefulness and meaningfulness components were assessed at a higher level in the patients than in the healthy subjects.
2. Age and marital status were associated with the sense of coherence in the treatment groups in the comprehensibility, resourcefulness and meaningfulness dimensions.
3. The disease duration was associated with only one of components of the sense of coherence – a sense of resourcefulness.
4. It is reasonable to develop human potential through preventive interactions aimed to improve the sense of coherence in oncological patients.

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