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CORRELATIONS BETWEEN FORMS OF EMOTIONAL HEALTH AND COPING WITH STRESS IN THE CONTEXT OF HEALTH EDUCATION PEOPLE WHO EXPERIENCED MALIGNANT TUMOURS

INTRODUCTION

Malignant tumors are the source of strong psychological tension because they lead to physical suffering and they are a real-life risk (Wrona-Polańska, 1999). Among them, breast cancer represents a very important medical problem. It is the commonest cancer among women, and as they get older, they are more often affected by it, especially after menopause. The main method of breast cancer therapy is a mastectomy, which causes a sense that the women have lost their femininity. In addition, mastectomy disturbs their own image and makes them feel worthless (Mroczek et al., 2012; de Walden-Gałuszko, 2011). A lot of data indicate that people who experienced malignant tumours are more anxious than the healthy population. The anxiety may appear in all stages of a disease: at the moment of diagnostic procedure implementation, during the therapy and after it. The anxiety may result from a fear of recurrence of the disease (Haan et al., 2010; Mess et al., 2006; Trzebiatowska, 2000). However, we should pay attention to inner mental resources of oncological patients that can be a buffer against disorders of mental health. The inner mental resources are: mental well-being with its constituent life satisfaction, connected with them discretionary ways of coping with stress, which can be conducive to more effective psychosocial functioning.

In this study the author refers to the model of mental health by Keyes and Lopez (Trzebińska, 2008; Westerhof, Keyes, 2010) who have extracted four forms of health: 1) completely mentally ill – floundering; 2) incompletely mentally ill – struggling; 3) incompletely mentally healthy – languishing; 4) completely mentally healthy – flourishing. The model proposed by the author of the study (Figure 1) also allows for the average intensity of well-being and psychopathology (Olszewski, 2012). Such a modification enables to identify nine different forms of mental health that the author narrows down to the emotional area.

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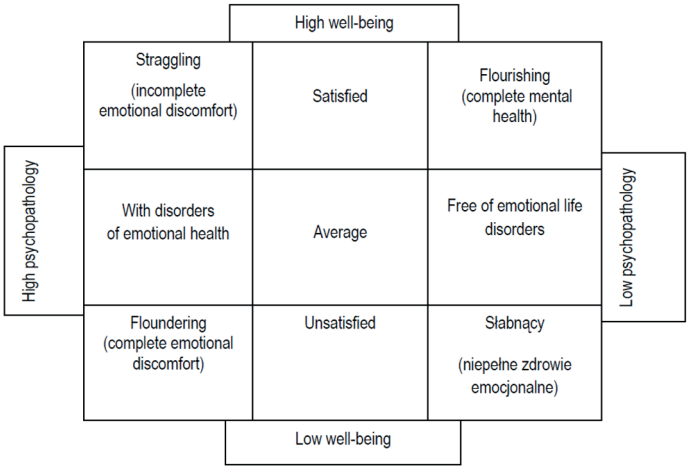

Figure. 1. The Complete State Model of Mental Health
Source: the study of author on the basis of Keyes Lopez (2002, by: Trzebińska, 2008).

Struggling with cancer should be considered as a prolonged stress-related transaction. People who experienced malignant tumours use various strategies of coping with cancer-related stress. However, most of them demonstrate distinct difficulties in this field. Cancer may activate using of unadaptive ways of coping. Wrona-Polańska (1999) shows that patients who experienced breast cancer with its relapse significantly less often than patients with the first step of cancer use strategies oriented towards solving problems and searching for positive sides of the situation. Additionally, used by them coping focused on emotions is the predictor of depression and escalating of disease symptoms. The results of Michałowska-Wieczorek's research (2006) show that better prognosis and better quality of life are connected with active, confrontational strategies of coping with cancer, in contrast to passivity. Moreover, social support plays an important role in effective coping with anxiety that is the result of a disease, especially for women (Mielcarek, Kozaka, 2006). There is also empirical evidence that religious coping with stress can protect patients after mastectomy against depression and support the process of their recovering (Aukst-Margetić et al., 2005). The results of other research show that oncological patients who use strategies focused on a problem and emotional strategies, in contrast to people using avoidant coping, are characterized by better mental and physical health (Roesh et al., 2005).

Education of patients helps them make normal activities and return to work before they got ill, in spite of their disease. The education, called pedagogy of health, is increasingly seen as an essential element of the holistic behavior of therapeutic effect (Borowska, 2007; Woynarowska, 2013). According to Woynarowska (2013), the main purpose of the education of sick people is assisting them in the understanding of the disease, in the coping with the disease and the feeling of satisfaction with life.

Thanks to the education oncological patients are able to obtain the knowledge and skills called disease self-management in the way contributing to constructive adaptation to the disease. It means "optimal life" with the disease and in a good mood (Woynarowska, 2013). The results of research and observations point to the need for patients to health education associated with malignant tumors (Heszen, 2012). Health education helps patients interact with the doctor during diagnosis, contributes to better participation in treatment, and reduces concerns associated with the development of the disease (Heszen, 2012). For Carver, Scheier and Weintraub, active coping, planning, searching for instrumental support, positive reevaluation and development and acceptance of the disease are the ways of coping with stress that facilitate using health education (Juczyński, Ogińska-Bulik, 2009). Most of them are active ways, focused on a problem. On the other hand, one of the elements of health education is to provide oncological patients with the knowledge how to cope with stress (Ryś et al., 2014). Thus, the educational impact should be concentrated on teaching patients effective ways of coping with malignant tumors and with traumatic experiences resulting from the disease.

METHODOLOGY OF RESEARCH

The aim of the research was to indicate correlations between the ways of coping with difficulties and the forms of emotional health by patients after mastectomy, as compared to the control group.

37 women that experienced mastectomy from Lublin Amazon Association (they formed a criterion group – K), and 24 healthy women (from a comparison group – P) took part in the research. The selection criterion of the first group was a diagnosis of breast cancer and mastectomy, at least 5 years from the date of the examination. It was a deliberate selection group. The second group was made up of healthy people who were not subjected to surgical operation. In this group, there were people chosen by quota selection. The criteria for belonging to the group were: sex, age, education and marital status. The women were at the age of 42-76. The average age of the group K was 59.86. However, the average age of the group P was 58.67.

The following research tools were used:

1. **Satisfaction with Life Scale – SWLS** by E. Diener, R.A. Emmons, R.J. Larson and S. Griffin in the adaptation of Z. Juczyński (2001). This tool includes 5 statements, which are subject to evaluation by tested people on a scale of 1 to 7. The scale allows us to test life satisfaction, consisting on subjective well-being.
2. **State-Trait Anxiety Inventory STAI** by C.D. Spielberger, J. Strelau, M. Tysarczyk and K. Wrześniewski in the Polish version. The questionnaire enables to detect people with a low or high level of anxiety treated as a con-

stant internal disposition (trait) and makes it possible to define variability of anxiety intensity recognized as a state. Anxiety comprehended as a trait was used in the own research. The anxiety may be tested by using X-2 scale (Wrześniewski et al., 2002).

3. **Coping Orientations to Problems Experienced – COPE** by Ch.S. Carver, M.F. Scheier, J.K. Weintraub, in the adaptation of Z. Juczyński and N. Ogińska-Bulik (2009). The inventory allows us to test how often people use 15 ways of coping with stress, such as: 1) active coping (Ak); 2) planning (Pl); 3) seeking instrumental support (Wi); 4) seeking emotional support (We); 5) suppression of competing activities (Un); 6) turning to religion (Zr); 7) positive reinterpretation and growth (Pp); 8) restraint coping (Pd); 9) acceptance (Ac); 10) focus on emotions (Ke); 11) denial (Zp); 12) self-distraction (Ou); 13) behavioral disengagement (Zd); 14) use of alcohol and other psychoactive agents (Za); 15) sense of humor (Ph). In the Polish adaptation, using factor analysis, these ways are contained in three general remedial styles. There are the following styles: 1. Active style (SA), containing the ways 1, 2, 5, 7, 8; 2. Avoidant style (SU) that consists of the ways 9, 11, 12, 13, 14, 15; 3. Emotionally – supportive style (SWE), with the ways 3, 4, 6, 10.

THE RESULTS. FORMS OF EMOTIONAL HEALTH IN THE GROUP OF WOMEN WHO EXPERIENCED MASTECTOMY AND IN THE GROUP OF HEALTHY WOMEN

The results of the own research show that in the tested groups we can extract subgroups of people with different forms of emotional health. Among the women who experienced mastectomy, subgroups with two forms of emotional life were determined with the help of the cluster analysis by the k-means method, carried out on the results of Satisfaction with Life Scale – SWLS and State-Trait Anxiety Inventory STAI (using the X-2 scale). "Floundering" people form one of the subgroups (N = 20), and "languishing" people – the other one (N = 17). Among healthy women, two equal subgroups were extracted (N = 12) – "brave" and "floundering." The subgroups are statistically different in terms of the level of life satisfaction and the anxiety level. Number, median values, standard deviations and significance of differences involving tested variables are contained in Table 1 (for women who experienced mastectomy) and in Table 2 (for healthy women).

Table. 1. Number (N), mean values (M), standard deviations (SD) of life satisfaction (SWLS) and anxiety level (STAI)

Subgroups of a criterion group	1. "Floundering" (GK) N = 20		2. "Languishing" (SK) N = 17		Z	p<
	M	SD	M	SD		
SWLS	3.60	0.75	4.41	1.33	-1.95	0.05
STAI	6.90	1.21	4.35	1.12	-4.98	0.001
Subgroups of a comparison group	**1. „Brave" (OP) N = 12**		**2. „Floundering" (GP) N = 12**		**Z**	**p<**
	M	**SD**	**M**	**SD**		
SWLS	6.33	1.16	4.25	1.22	-3.30	0.001
STAI	3.75	1.36	6.75	1.22	-3.81	0.001

Source: the study of author.

The data contained in table I show that in a comparison group, "brave" people (M = 6,33) in comparison to "floundering" ones (M = 4,25) are characterized by a significantly higher level of life satisfaction (Z = -3,30; p < 0,001) and a significantly lower anxiety level (the "brave" group, M = 3,75; the "sinking" group, M = 6,75; Z = -3,81; 0,001). The data in table 1 also show that among people who experienced malignant tumors, the subgroup of "floundering" people (M = 6,90) in comparison to the subgroup of "languishing" ones (M = 4,35) is characterized by a significantly higher anxiety level (Z = -4,98; p < 0,001) and a significantly lower level of life satisfaction ("floundering", M = 3,60; "languishing", M = 4,41; Z = -1,95; p < 0,05).

CORRELATIONS BETWEEN THE FORMS OF EMOTIONAL HEALTH AND THE WAYS OF COPING WITH DIFFICULTIES

The relationships between satisfaction with life and an anxiety level and the ways of coping with difficulties in the groups of women who experienced mastectomy are presented in Table 2.

In the two subgroups of people who experienced malignant tumours differing in forms of emotional health ("floundering" and "languishing"), the factors affecting forms of emotional health are connected with the ways of coping with difficulties. In the subgroup of "languishing" people there are significant correlations between life satisfaction and ways of coping with stress (3 correlations), and an anxiety level (STAI) and remedial activities (2 correlations). In the subgroup of "floundering" people, by contrast, coping is connected with life satisfaction (2 correlations). However, the strongest correlations are noticeable in the subgroup of "languishing" people.

Table 2. Correlation between subjective well-being and anxiety, and ways of coping with stress

Subgroups	Variables	5 Un	6 Zr	9 Ac	10 Ke	11 Zp	15 Ph	18 SWE
1. "Floundering" (GK)	SWLS				ρ-,51 *	ρ,51 *		
	STAI							
2. "Languishing" (SK)	SWLS	ρ,64 **		ρ,61 **			ρ,49 *	
	STAI		ρ,71 **					r,60 *

r – Pearson's
p – Spearman's
* The correlation is significant on the level 0,05
** The correlation is significant on the level 0,01
Source: the study of author.

They involve anxiety and religious coping (Zr; p = 0.71), life satisfaction and suppression of competing activities (Un; p = 0.64), and also satisfaction and acceptance (Ac; p = 0.61). In the subgroup of "languishing" people satisfaction with life correlates positively with a focus on a problem (Un; p = 0.64), acceptance of the present situation (Ac; p = 0.61) and sense of humor (Ph; p = 0.49). However, anxiety is positively connected with an emotionally – supportive remedial style (SWE; r = 0.60) and a religious strategy of coping with difficulties (Zr; p = 0.71), which is an element of this style. On the other hand, in the subgroup of "floundering" people the analysis of the research results shows a negative correlation between life satisfaction and a focus on emotions (Ke; p = -0.51), and also a positive relationship between satisfaction and a denial of the present difficulties (Zp; p = 0.51). However, in the group of healthy women, there are not significant correlations between constituent forms of emotional health (satisfaction with life and an anxiety level) and ways of coping with stress used by them.

DISCUSSION

The results of the own research show that in the tested groups we can extract subgroups of people with different forms of emotional health. Among the women after mastectomy, subgroups with two forms of emotional health were determined – "floundering" people (larger group) and "languishing" people.

Among healthy women, however, two equal subgroups were extracted – "brave" and "floundering" ones. Therefore, for people affected by cancer, forms of emotional health, which are not conducive to the effective psychosocial functioning have been identified. The "emotionally floundering" people are characterized by complete emotional discomfort that results from the lower life satisfaction and the higher

anxiety level. "Languishing" people, by contrast, demonstrate the incomplete emotional health, which is the result of the lower life satisfaction. The results of the own research confirm clinical observations showing that oncological patients are more anxious and unhappy than healthy population (Ogińska-Bulik, Juczyński, 2008). Unadaptive forms of emotional health extracted in the tested group can result from mentally plagued experiences connected with cancer (Haan et al., 2010).

In both subgroups of people who experienced malignant tumors differing in forms of emotional health ("floundering" and "languishing"), the factors affecting the form of emotional health are connected with the ways of coping with difficulties. The results confirm contained in the references assumption, according to which the strategies of coping with stress are connected with the subjective assessment of personal health (Carr, 2009).

In the group of "languishing" people, life satisfaction encourages remedial adaptation: a focus on a problem (Un, $p = 0.64$), acceptance of the situation when it is not possible to change it (Ac, $p = 0.61$) and use of humor (Ph, $p = 0.49$). Meanwhile, the higher anxiety level is connected with the emotionally-supportive style of coping (SWE, $r = 0.60$), and it encourages turning to religion (Zr, $p = 0.71$). Identified correlations connected with anxiety and coping are compatible with the results of other research presented in the references. They show that, for women who experienced malignant tumors, social support (Mielcarek, Kozaka, 2006) and religious coping that may protect them against depression and support the process of recovering (Aukst-Margetić et al., 2005) play an important role in effective coping with anxiety that is the result of their problems. Moreover, the results of the own research show that in the group of "floundering" people life satisfaction is conducive to the denial of difficulties (Zp, $p = 0.51$) and the focus on emotions (Ke, $p = -0.51$). The life satisfaction in this group has a less important adaptive role than in the group of "languishing" people. These results confirm the research results of Roesh et al. (2005), proving that oncological patients who use strategies focused on a problem and emotional strategies, in contrast to people using avoidant coping, are characterized by better mental health.

The functioning of "floundering" people in the face of difficulties is avoidant and repressive, but the "languishing" group is characterized by increasing complexity (the functioning is active, supportive, emotional and avoidant). It may indicate that the people from "languishing" group have better remedial adaptation, as people who have diverse strategies of coping at their disposal are able to adjust behavior to the requirements of a concrete difficult situation in a flexible way. Therefore, they cope with difficulties more effectively (Olszewski, 2010).

In the group of healthy women, however, there are no significant correlations in the tested area. The ways of coping with difficulties used by healthy people (both "brave" and "floundering") do not have a significant relationship with the factors affecting the form of emotional health (the level of life satisfaction and the level of anxiety). Remedial activities of these people can be to a larger extent dependent on

other factors, which have not been taken into consideration in the research, for example, requirements of situations that can point to increasing flexibility promoting better adaptation (Olszewski, 2010).

The health pedagogy impact should allow for differences between oncological patients resulting from the forms of their emotional health. It would be necessary first of all to help people having an increased anxiety level and a low level of life satisfaction. Education of patients should be oriented towards teaching active, focused on a problem ways of coping with malignant tumors.

The number of the tested groups is rather little and, for that reason, there is a necessity to use caution in the interpretation of the results. However, they may be the basis for large-scale research in this area.

CONCLUSIONS

1. Both women who experienced mastectomy and healthy women are not a homogeneous group in terms of emotional health forms. Two groups characterized by two forms of mental health have been extracted among the women after mastectomy – "floundering" people (larger group) and "languishing" people. Among healthy women, two equal groups have been identified – "brave" people and "floundering" ones.
2. In both groups of people who experienced malignant tumors differing in forms of emotional health ("floundering" and "languishing"), the factors determining the form of mental health are connected with the ways of coping with difficulties.
3. In the group of "languishing" people, satisfaction with life encourages remedial adaptation: the focus on a problem, acceptance of the situation when you are not able to change it and use of humor. However, the higher level of anxiety is related to the emotionally-supportive style of coping and encourages turning to religion.
4. In the group of "floundering" people, however, life satisfaction promotes the denial of difficulties and disengagement with negative emotions, and it has a less important adaptive role than in the group of "languishing" people.
5. The functioning of "floundering" people in the face of difficulties is avoidant and repressive, but the functioning of "languishing" group is characterized by increasing complexity (it is active, supportive, emotional and avoidant).
6. The health pedagogy impact should allow for differences between oncological patients resulting from the forms of their emotional health. It would be necessary first of all to help people having an increased anxiety level and a low level of life satisfaction. Education of patients should be oriented

towards teaching active, focused on a problem ways of coping with malignant tumors.

BIBLIOGRAPHY

Aukst-Margetić, B., Jakovljević, M., Margetić, B., Bišćan, M., Šamija, M. (2005). Religiosity, depression and pain patients with breast cancer. *General Hospital Psychiatry, 27.*

Borowska, T. (2007). Emocje wyzwaniem dla współczesnej edukacji. *Zeszyty Naukowe Wyższej Szkoły Humanitas. Pedagogika, 2.*

Carr, A. (2009). *Psychologia pozytywna*. Poznań.

Walden-Gałuszko de, K. (2010). *Psychoonkologia w praktyce klinicznej*. Warszawa.

Haan, J., Grothuesmann, D., Neise, M., Hille, U., Hillemanns, P. (2010). Quality of life and satisfaction after breast cancer operation. *Gynecologic Oncology, 282.*

Heszen, I. (2012). Kliniczna psychologia zdrowia. In H. Sęk (eds.), *Psychologia kliniczna*. Warszawa.

Juczyński, Z. (2001). *Narzędzia pomiaru w promocji i psychologii zdrowia*. Warszawa.

Juczyński, Z., Ogińska-Bulik, N. (2009). *Narzędzia pomiaru stresu i radzenia sobie ze stresem.* Warszawa.

Mess, E., Malewicz, K., Lisowska, A., Jonak, K. (2006). Ocena poziomu lęku w chorobie nowotworowej układu krwiotwórczego. *Onkologia Polska, 9.*

Michałowska-Wieczorek, I. (2006). Rola wsparcia w zmaganiu się z chorobą nowotworową. *Psychoonkologia, 10.*

Mielcarek, P., Kozaka, J. (2006). Funkcjonowanie emocjonalne chorych z objawami niepowodzenia chemioterapii zaawansowanego raka jajnika. *Psychoonkologia, 10*.

Mroczek, B., Kurpas, D., Grochans, E., Kuszmar, G., Rotter, I., Żułtak-Bączkowska, K., Karakiewicz, B. (2012). Funkcjonowanie psychoseksualne kobiet po leczeniu raka sutka. *Psychiatria Polska, 46.*

Ogińska-Bulik, N., Juczyński, Z. (2008). *Osobowość, stres a zdrowie*. Warszawa.

Olszewski, J.K. (2010). *O zaradności obezwładnionych lękiem. Osoby z nerwicowymi zaburzeniami lękowymi a stres.* Lublin.

Olszewski, J.K. (2012). Związki między dobrostanem psychicznym – psychopatologią a radzeniem sobie ze stresem u osób z różnymi formami zdrowia psychicznego. *Psychiatria i Psychologia Kliniczna, 12.*

Roesh, S.C., Adams, L., Hines, A., Palmores, A., Vyas, P., Tran, C., Pekin, S., Vaughn, A.A. (2005). Coping with Prostate Cancer: A Meta-Analytic Review. *Journal of Behavioral Medicine, 28.*

Ryś, B., Kudłacik, B., Fraś, M., Michalik, A. (2014). Oczekiwania pacjentów w zakresie edukacji zdrowotnej wobec pielęgniarki podstawowej opieki zdrowotnej. *Problemy Pielęgniarstwa, 22 (4).*

Trzebiatowska, I. (2000). Zaburzenia lękowe w chorobie nowotworowej – aspekt praktyczny. *Psychoonkologia. 6.*

Trzebińska, E. (2008). *Psychologia pozytywna.* Warszawa.

Westerhof, G., Keyes, C.L.M. (2010). Mental illness and mental health: the two continua model across the lifespan. *Journal of Adult Development, 17.*

Woynarowska, B. (2013). *Edukacja zdrowotna.* Warszawa.

Wrona-Polańska, H. (1999). Zmiana samopercepcji w procesie zmagania się z chorobą o niepomyślnym rokowaniu. In D. Kubacka-Jasiecka, W. Łosiak (eds.), *Zmagając się z chorobą nowotworową.* Kraków.

Wrześniewski, K., Sosnowski, T., Matusik, D. (2002). *Inwentarz Stanu i Cechy Lęku STAI. Polska adaptacja STAI. Podręcznik.* Warszawa.

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Keywords: cancer, emotional health, coping with stress, health pedagogy, health education
Abstract: A lot of data indicate that people who experienced malignant tumours are more anxious than the healthy population. However, we should pay attention to inner mental resources of oncological patients that can be a buffer against disorders of mental health. Education of patients helps them make normal activities. The education, called pedagogy of health, is increasingly seen as an essential element of the holistic behaviour of therapeutic effect. The aim of this study is to indicate correlations between the ways of coping with difficulties and the forms of emotional health by patients after mastectomy, as compared to the control group. The results indicate that in the groups of people that experienced malignant tumours differing in forms of emotional health, the factors affecting forms of psychological health are connected with the ways of coping with difficulties. The health pedagogy impact should allow for differences between oncological patients resulting from the forms of their emotional health. Education of patients should be oriented towards teaching active, focused on a problem ways of coping with malignant tumours.

ZALEŻNOŚCI MIĘDZY FORMAMI ZDROWIA EMOCJONALNEGO A RADZENIEM SOBIE ZE STRESEM W KONTEKŚCIE EDUKACJI ZDROWOTNEJ U OSÓB DOTKNIĘTYCH CHOROBĄ NOWOTWOROWĄ

Słowa kluczowe: rak, zdrowie emocjonalne, radzenie sobie ze stresem, pedagogika zdrowotna, edukacja zdrowotna

Streszczenie: Wiele danych świadczy o tym, że osoby dotknięte rakiem są bardziej lękowe i depresyjne niż zdrowa populacja. Jednakże należy zwrócić uwagę na wewnętrzne zasoby psychiczne pacjentów onkologicznych, które mogą pełnić funkcję bufora chroniącego przed zaburzeniami zdrowia psychicznego. Podejmowaniu, mimo choroby, normalnej aktywności sprzyja, określana mianem pedagogiki zdrowotnej, edukacja pacjentów. Celem podjętych badań było wskazanie zależności między formami zdrowia emocjonalnego a sposobami radzenia sobie ze stresem w grupie kobiet po mastektomii i w grupie kobiet, które nie były dotknięte chorobą nowotworową. Wyniki badań wskazują, że w grupach osób dotkniętych chorobą nowotworową różniących się formami zdrowia emocjonalnego czynniki decydujące o formie zdrowia psychicznego są powiązane ze sposobami radzenia sobie ze stresem. Oddziaływania z obszaru pedagogiki zdrowotnej powinny uwzględniać różnice istniejące między pacjentami onkologicznymi, wynikające z formy zdrowia emocjonalnego. Edukacja pacjentów powinna być nastawiona na uczenie aktywnych, nastawionych na problem sposobów radzenia sobie z chorobą nowotworową.