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SATISFACTION WITH LIFE AND SOCIAL FACTORS IN DECISION-MAKING PROCESS ON BREAST RECONSTRUCTION IN WOMEN AFTER MASTECTOMY

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The aim of the study was to analyse the correlation between satisfaction with life in women after mastectomy and motivation to undergo breast reconstruction, compared to women who after breast amputation did not decide to undergo reconstructive treatment.
Material and methods. Comparative analysis comprised patients after mastectomy, who decided on breast reconstruction (40) and those who did not undergo reconstructive surgery (40). The study was conducted in the Department of Plastic, Reconstructive and Aesthetic Surgery, Medical University of Lodz and Department of Oncological surgery and Breast Diseases ICZMP, Łódź, between 2013-2015. In the study the question whether higher satisfaction with life prompts decision on breast reconstruction was investigated. The Satisfaction with Life Scale (SWLS) was used, as well as an original questionnaire. The correlations between statistical parameters were evaluated using the chi-square test.
Results. We have demonstrated differences between the level of satisfaction with life in patients who decided to undergo breast reconstruction and those who did not choose reconstructive surgery. The discrepancies may reflect differences in the system of values and level of satisfaction with life before reconstructive treatment and also point to potential effect of these factors on the decision to undergo surgery.
Conclusions. 1. Differences in cognitive structures between 'Amazons' determine the decision on reconstructive treatment. 2. Transfer of information between the therapeutic team and women after mastectomy is not satisfactory. 3. Higher level of satisfaction with life has a positive effect on the decision of breast reconstruction.
Key words: mastectomy, satisfaction with life, breast reconstruction

Recent advances in molecular biology, biochemistry, immunology and genetics and development in diagnostic and therapeutic methods have led to progress in multispecialistic treatment of patients after mastectomy. Currently not only the efficacy of therapeutic process is stressed, but also individual approach comprising patient's identity, psychosocial needs and choices that influence satisfaction with life and quality of life. Satisfaction with life reflects satisfying quality of life, degree to which important needs are fulfilled and depends on individual aspirations, social status and cognitive processes of the individual. According to WHO, Quality of Life is an individual perception of the person's position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a subjective evaluation of a person's life situation compared with other people from the same age group or achievement of a highly valued merit (1). In literature these terms are often used and synonymous, but are defined differently depending on the clinical specialty (psychology, psychopathology, sociol-

ogy, medical sociology, philosophy or medicine) (2). According to Jurczyński satisfaction with life depends on the result of comparing own situation with established individual standards (3). According to Halicka this term reflects a balanced multifactorial evaluation – of current life and achievements, however, Jaracz determined it as a conscious grading of various life aspects as a whole (4). Satisfaction with life may become a useful tool in empirical studies in medicine (5). Contentment as a cognitive element of mental well-being is defined as a process dependent on comparison between a given individual conditions with the standard ones. The smaller the discrepancy between aspirations and achievements, the higher the level of satisfaction with life. Cognitive structures represent a system of information about the outside environment and internal world, determining behaviour and development of personality (6). In women after mastectomy culture norms dictate a certain way of behaviour, at the same time creating discomfort and sense of constraint.

The results of the presented study reflect the level of satisfaction with life in a group of women after mastectomy and its effect on the decision of breast reconstruction.

The aim of study was analysis of the correlation between satisfaction with life in women after mastectomy and motivation to undergo breast reconstruction, compared to women who after breast amputation did not decide to undergo reconstructive treatment.

MATERIAL AND METHODS

The study involved patients aged 18 years and more, at least 1 year after completion of surgical treatment, who gave formal consent to participation in the study. The study at the Department of Plastic, Reconstructive and Aesthetic Surgery, Medical University of Łódź, and Department of Clinical Oncology and Breast Diseases between 2013 and 2015 was approved of by the Bioethical Committee of the Medical University of Łódź (RNN /233/13/ KE).

The analysis comprised 80 patients aged between 32 and 60 years after mastectomy. The group was divided into two subgroups: studied (A) – 40 women who decided on breast reconstruction and comparative (B) – 40 women who did not undergo reconstructive surgery. An original questionnaire was used, consisting of 48 questions on the disease and various aspects of patients' life and personality. From the above 17 questions were selected, grouped into 6 areas which may directly affect the level of satisfaction with life in women after mastectomy:

1. Information aspect (After mastectomy, did you feel the urge to learn more about your disease? Who provided most information? Were you informed about the possibility of breast reconstruction before mastectomy? Were you informed about the possibility of the nipple-areola complex reconstruction? Were you informed about possible complications of breast reconstruction?).
2. Professional environment (Do you feel well only at work? Do you encounter the so called unfavorable (towards you) environment at work? Has the disease led to workaholism in your case? Are you more sensitive to everything that might impair your material status?).
3. Domestic environment (Does your sense of material worth depend on your income? Is family acceptance the source of your sense of safety?).
4. Private life (Has the disease significantly limited your sexual activity?).
5. Relations with the partner (Did your partner give you sense of safety? Did you often quarrel with your partner? Is your treatment important for your partner?).
6. Social aspect (After surgery, did you try to limit social contacts? Was religious faith the source of your sense of safety?).

The respondents answered each of the questions by choosing from 5 possible variants: strongly agree, agree, hard to say, disagree, strongly disagree.

Apart from the questionnaire, in both groups of women a psychological tool evaluating satisfaction with life was employed. The SWLS scale is used to measure the level of satisfaction in life, as a result of comparison between own situation and self-developed standards and constitutes of 5 statements assessed according to the 7-grade Likert scale. The result is obtained by adding the points for each statement. The higher the score, the great er the level of satisfaction. In the Polish adaptation by Jurczyński the tool shows satisfactory psychometric parameters. The Cronbach

reliability index is 0.81, and sensitivity measures by the correlation of the tool with the level of self-esteem is 0.56; with optimism the correlation was at the level of 0.45 (1). The test was conducted by one of the authors, who had appropriate qualifications (Pracownia Testów Psychologicznych Polskiego Towarzystwa Psychologicznego, Certificate no 264/2013).

Statistical significance of differences between groups was evaluated using the STATISTICA 7.1 PL software. The analysis of distribution was employed to compare the frequency of responses in particular variants of correlation between independent variables in women after mastectomy using the chi-square test.

RESULTS

The responses to question on information sources during the disease were similar in both groups (p=0.2538). The respondents obtained most information from their physician (A – 50% and B – 30%) and from the internet (A – 20% and B – 35%) (tab. 1). There were no significant differences between women from group A and B in the urge to learn more about their disease (p=0.2496). Patients who decided on breast reconstruction, but also those who did not choose surgery, in general declared the need to learn more about the disease (47.5% and 55%, respectively). Similar results were obtained for the possibility of breast reconstruction before mastectomy (p=0.2382). In both groups the women claimed that they had not been properly informed about such possibility (A – 52.5% and B – 55%). Information on complications of various methods of reconstruction was provided to both groups, there was no significant difference (p=0.5034). In both groups the women answered: "disagree" and "strongly disagree" (A – 57.5% and B – 62.5%).

There were differences in the response to question on information about possibility of the nipple-areola complex reconstruction (p=0.0262). Women who underwent reconstructive surgery more frequently reported that they had been informed (27.5% vs 12.5%), than those who did not decide on breast reconstruction – the percentage of responses "disagree" and "strongly disagree" was higher in this group (80% vs 62.5%) (tab. 2).

The question about unfavorable environment at work (p=0.3029) usually elicited responses „disagree" and „strongly disagree", but there were no significant differences between the groups (A – 57.5% and B – 60%). The distribution of responses on unstable financial position in both groups was p=0.2563. Women who did decide on reconstructive surgery more frequently answered „disagree" and „strongly disagree" (A – 57.5% and B – 60%), while those respondents who underwent breast reconstruction more frequently replied "disagree". The distribution of responses on well-being connected with professional activity did not differ

Table 1. Responses to question "Who gave you most information?"

Group	Family doctor	My doctor	Nursing team	Psychologist	Internet	Other	Total
Women without reconstruction (B)	3	12	1	2	14	8	40
	7,50%	30%	2,50%	5%	35%	20%	100%
Women after reconstruction (A)	3	20	0	0	8	9	40
	7,50%	50%	0%	0%	20%	32,50%	100%
Total	6	32	1	2	22	17	80

Women without reconstruction vs after reconstruction p=0.2538

Table 2. Responses to question "Were you informed about the possibility of nipple-areola complex reconstruction?"

Group	Strongly agree	Agree	Hard to say	Disagree	Strongly disagree	Total
Women without reconstruction (B)	5	1	2	10	22	40
	12,50%	2,50%	5%	25%	55%	100%
Women after reconstruction (A)	11	3	1	1	24	40
	27,50%	7,50%	2,50%	2,50%	60%	100%
Total	16	4	3	11	46	80

Women without reconstruction vs after reconstruction p=0.0262

significantly between the two groups (p=0.5884), positive response to this question was given by 60% of women who underwent reconstruction and 47.50% of those who did not decide on surgery. Similar distribution was seen among responses to question on workaholism (p=0.1024). Women from both groups most frequently replied "disagree" and „strongly disagree" (A – 67.5% and B – 57.5%).

In order to evaluate the quality of domestic environment, financial status and its dependence on income of the respondents was questioned (p=0.5472). Te responses to these questions were most frequently "strongly agree" and "agree" (A – 57.5% and B – 62.5%). There were significant differences between groups in responses to question,, Is family acceptance the source of your sense of safety?" (p=0.0037). Among women who underwent breast reconstruction negative answers prevailed (A – 22.5%, B – 0.0%) (tab. 3).

Sense of safety provided by the partner did not differ in both groups (p=0.3553). Evaluation of the impact of partner on satisfaction with life among women after mastectomy revealed that respondents who decided on breast reconstruction more frequently quarreled with their partners (A – 67.5%, B – 47.5%), though the differences were not significant statistically (p=0.1902). Responses on the value of breast reconstruction for their partner did not differ significantly between both groups (p= 0.9666), and the majority of respondents declared that this operation was important for their partner.

There was a difference in the distribution of responses to question on limits to sexual activity between both groups (p=0.0119). Women who did not decide on breast reconstruction more frequently replied „hard to say" (B – 27.5% and A – 5%), while in the breast reconstruction group the women denied any limits to their sexual activity (A – 22.5% and B – 2.5%) (tab. 4).

For women who did not decide on reconstruction, religious faith was the source of their sense of safety (B – 82.50%, A – 47.50%) (p=0.0002) (tab. 5).

Table 3. Responses to question "Is family acceptance the source of your sense of safety?"

Group	Strongly agree	Agree	Hard to say	Disagree	Strongly disagree	Total
Women without reconstruction (B)	32	8	0	0	0	40
	80%	20%	0%	0%	0%	100%
Women after reconstruction (A)	21	6	4	5	4	40
	52,50%	15%	10%	12,50%	10%	100%
Total	53	14	4	5	4	80

Women without reconstruction vs after reconstruction p=0.0037

Table 4. Responses to question "Has the disease limited your sexual activity?"

Group	Strongly agree	Agree	Hard to say	Disagree	Strongly disagree	Total
Women without reconstruction (B)	9	9	11	10	1	40
	22,50%	22,50%	27,50%	25%	2,50%	100%
Women after reconstruction (A)	11	9	2	9	9	40
	27,50%	22,50%	5%	22,50%	22,50%	100%
Total	20	18	13	19	10	80

Women without reconstruction vs after reconstruction p=0.0119

Table 5. Responses to question "Is religious faith the source of your sense of safety?"

Group	Strongly agree	Agree	Hard to say	Disagree	Strongly disagree	Total
Women without reconstruction (B)	24	9	5	2	0	40
	60%	22,50%	12,50%	5%	0%	100%
Women after reconstruction (A)	7	12	5	6	10	40
	17,50%	30%	12,50%	15%	25%	100%
Total	31	21	10	8	10	80

Women without reconstruction vs after reconstruction p=0.0002

There were no significant differences between the two groups in diminishing social contacts after mastectomy (p=0.6120). The distribution of responses to the question „has the quality of life changed after mastectomy?" was statistically significantly different in both groups (p=0.0117). Women who underwent breast reconstruction more frequently described current quality of life as „rather worse" (A – 42.5% and B – 10%), while women who did not decide on reconstruction more frequently as "significantly worse" (B – 32.5% and A – 12.5%) (tab. 6).

The results of the life satisfaction questionnaire (SWLS) showed statistically significant differences (p=0.0354). Women who underwent breast reconstruction more frequently declared higher satisfaction with life (32.5%), while those who did not decide on reconstructive surgery more frequently declared average satisfaction with life (45%) (tab. 7).

DISCUSSION

The need of studies on satisfaction with life in women after mastectomy is confirmed by the patients themselves, for whom the surgery and its effect constitute an important element of life, as well as by their families. In our study we analyzed a group of women after mastectomy, who decided on breast reconstruction, and compared their responses with those of women who did not undergo reconstructive surgery. In Poland still a small percentage of women opt for breast reconstruction after mastectomy. The questionnaire study among women after breast removal who have not yet decided on further course of their treatment allowed for evaluation of factors influencing the decision on reconstructive surgery. On the basis of the results of our study (SWLS) it is clear that there are significant differences between satisfaction with life among the studied women. Respondents who decided on breast reconstruction significantly more frequently scored higher values in this scale, which may reveal higher subjective satisfaction with life. These women reported also smaller deterioration of their quality of life after mastectomy as compared to those who did not decide on breast reconstruction. General satisfaction with life reflects overall health condition of the respondents, comprising both emotional and cognitive aspects, which determine the motivation for the decision on breast reconstruction.

Our findings on the quality of life in women after breast reconstruction confirm the results of Szadowska-Szlachetka and Musiał (7, 8). In our study the respondents who did not decide on reconstructive surgery more frequently reported decreased quality of life and evaluated their satisfaction with life as low. Probably women who underwent breast reconstruc-

Table 6. Responses to question "Has the quality of life changed after mastectomy?"

Group	Definite improvement	Improvement	Hard to say	Deterioration	Definite deterioration	Total
Women without reconstruction (B)	3	6	14	4	13	40
	7,50%	15%	35%	10%	32,50%	100%
Women after reconstruction (A)	4	5	9	17	5	40
	10%	12,50%	22,50%	42,50%	12,50%	100%
Total	7	11	23	21	18	80

Women without reconstruction vs after reconstruction p=0.0117

Table 7. Satisfaction with life in SWLS scale

Group	Sten scores			Total
	low	intermediate	high	
Women without reconstruction (B)	16	18	6	40
	40%	45%	15%	100%
Women after reconstruction (A)	19	8	13	40
	47,50%	20%	32,50%	100%
Total	35	26	19	80

Women without reconstruction vs after reconstruction p=0.0354

tion positively re-evaluated their life and made a conscious decision for surgery, and thus their sense of satisfaction with life was higher. According to Szczepańska-Gierach, satisfaction with life in women after breast removal increases with time after reconstructive surgery (9).

In women who did not choose breast reconstruction we may suppose that psychological negative impact of mastectomy has a significant effect on the functional aspect of their well-being. It may also be connected with older age of these women, as in females the level of satisfaction with life decreases with time, in particular around the menopausal period (10).

Satisfaction with life in women after mastectomy is defined by comparison of their real situation with an expected one, which is why they want to improve their quality of life. Respondents from the study group achieved this aim via various methods, oftentimes distorting the real situation picture, claiming it better than in reality. Patients who did not undergo breast reconstruction developed defensive mechanisms to help them cope with the disease and reconvalescence led to re-evaluation of various aspects of life which turned out to be more important (as for example pain relieve or improvement of physical activity). Such change in the hierarchy of values led to the development of extra-physical needs not connected with their health. These women, as it turned out in the study, have completely changed their system of values, appreciating extra-personal issues, not noticed before: religious, familial.

The religious aspect may also have an impact on the decision of breast reconstruction. In women who did not undergo reconstructive surgery religious faith was the source of the sense of safety. The ethical rules of Christianity may affect the spiritual domain and philosophy of life, which inspire cognitive processes even in later stages of life. The development of the spirituals dimension according to Heszen-Niejodek may determine crucial social needs that are not satisfied in the realm of consumption and material values (11). Szadowska-Szlachetka demonstrated that patients treated for breast cancer are in need of spirituals support (12). In our study women who did not undergo breast reconstruction demonstrated clear increase of "spirituality".

The analysis comprised also subjective evaluation of how women after mastectomy function in their families. The respondents answered question on the sense of safety provided by their families. All women after mastectomy who did not decide on breast reconstruction claimed that family acceptance is the source of their sense of safety. Focusing on the family and inter-relations gives a woman a chance to develop deep bonds and love. Women focused on the family base their sense of safety and personal value on family tradition. The value of family as a special source of support has been stressed by de Walden-Gałuszko, who wrote that the way the patient, as well as her family, react to the disease depends to a large extent on the adopted system of values (13).

The relationship between the patients and her therapeutic team is a crucial element of the therapeutic process and may influence the decision about further treatment. The ability to create a bond and understanding between the patient and therapeutic team may positively affect the decision on further breast reconstruction. In our study the majority of women in both groups were not informed about the possibility of breast reconstruction. Similarly, Jankau and Girrotto stress positive effect of providing information to patients on the course of operative treatment. According to authors, it helps to create positive psychological approach and accept the esthetic result (14, 15). The results of studies worldwide show that need of information about the disease, treatment, complications, prognosis, chance of recurrence and possibilities of breast reconstruction is great (16). The information aspect has a direct impact on subjective satisfaction with life, which affects directly the decision-making process on breast reconstruction.

Sexual aspect did not affect directly the decision on breast reconstruction, but women who decided on reconstructive surgery denied that „the disease limited significantly their sexual activity". According to available literature, significant factors individually affecting success in relationships, including sexual satisfaction, are emotional bond and love. In women it is connected with the need of close and honest relationship, self-esteem and attaining common aims in a relationship (17). An indirect motivation for breast reconstruction is regaining the sense of womanliness and

self-assurance. Care for satisfaction from sexual life was not as frequently reported (18, 19, 20). According to some authors reconstruction of the removed breast leads to better self-acceptance and better quality of life of patients (14, 21).

The presented results were obtained in a group of 80 patients. However, they may be regarded as initial studies for further analyses on similar problems among women after mastectomy.

CONCLUSIONS

1. Differences in cognitive structures between 'Amazons' determine the decision on reconstructive treatment.
2. Transfer of information between the therapeutic team and women after mastectomy is not satisfactory.
3. Higher level of satisfaction from life has a positive effect on the decision of breast reconstruction.

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