Should be cited as: Psychiatria Polska
2012, Vol. XLVI, Nr 1
pp. 51–61

Psychosexual functioning of women after breast cancer therapy

BOŻENA MROCZEK[1], DONATA KURPAS[2], , ELŻBIETA GROCHANS[3], GRAŻYNA KUSZMAR[4], IWONA ROTTER[1], KATARZYNA ŻUŁTAK-BĄCZKOWSKA[1], BEATA KARAKIEWICZ[1]

[1] Public Health Department, the Pomeranian Medical University in Szczecin

[2] Family Medicine Department, Wroclaw Medical University, Poland; National Vocational Medical Higher Education School In Opole, Poland

[3] Laboratory of Propaedeutics in Nursing, the Pomeranian Medical University in Szczecin

[4]Students' Public Health Association, Head: Associate professor Beata Karakiewicz

Summary

Objective: The study was to assess psychosexual functioning of women after breast cancer treatment, since this problem is very rarely discussed in Polish professional literature.

Interventions/methods: Our study involved 103 women after breast cancer treatment. The questionnaire was based on the Likert scale, the Beck Depression Inventory, and the author's questions.

Results: Some 52% of respondents were operated in 2002-2008; 93% had a radical mastectomy or a breast-sparing operation without reconstruction. About 71% accepted themselves before falling ill, and 65% regarded themselves as pretty. After surgery 57% felt attractive as sexual partners, 48.5% found it difficult to look at themselves naked, and 37,9% were embarrassed in their partners' presence. Some 26.21% of women had a very good and 42.71% satisfactory sexual life before the disease. After operation, 54% did not notice any changes in their partners' behavior, 14% avoided intimate situations, and 11% have not had sexual intercourse since operation.

Conclusions: In the relationships where sex was important, the quality of sexual intercourse improved. A factor which contributes to successful sexual life of a woman is her acceptance of her body and her feeling of attractiveness.

Key words: breast cancer, body image, psychosexual functioning,

A risk of breast cancer in Poland is comparable to the one observed in other countries. Every 14th Polish woman aged 45-69 is going to suffer from this tumor in her life. Breast cancer constitutes about 20% of all malignant tumors in Poland. A sudden increase in the incidence of this disease has been observed in our country since the 80s. More and more often breast cancer is diagnosed in young women. In recent years its incidence has risen by about 4-5%, and now it can be compared to other European countries and Japan [1,2,3]. This is probably due to environmental factors and the change in life style. This hypothesis is confirmed by a higher incidence of cancer among women in town than in the country [2,3]. Risk factors of breast cancer in Poland include old age, breast cancer family history at younger age, early menstruation, late menopause, using hormone replacement therapy for a long time, exposure to ionizing radiation, benign hyperplastic breast diseases, and being a carrier of mutated genes BRCA1 and BRCA2 [2,4,5]. Carriers of the mutated gene BRCA1 or BRCA2 are at a risk of about 80% to develop breast cancer [4,5]. Breast cancer and its systemic treatment causes in women serious mental suffering such as fear, terror, and depression [3,6,7]. These emotions accompany women from the very moment when they notice symptoms regarded as characteristic of breast cancer, and also later during the diagnostic and therapeutic processes. Women are afraid of death, pain and suffering [8,9,10,11]. Anxiety, helplessness and negative emotional experience caused by neoplastic disease and effects of therapy usually lead to cancerophobia and arouse fear of going to the doctor, which has an adverse influence on the therapeutic and recovery processes [7,9,12,13,14]. Reaction to neoplastic disease can be changed by new information, intensifying symptoms, the use of therapeutic methods, or prediction that disease

and therapy will negatively affect private, family and social life [11,12]. Body image is very important for women and so, regardless of their age, the loss of a breast is always very painful for them. A consequence of this situation is a syndrome described as „half women complex" [3,15,16]. Removal of a breast, which is an attribute of femininity and maternity, reduces self-esteem, causes anxiety, and shame, fear of the loss of a partner or the breakup of a family, as well as deprivation of psychosexual needs [3,7,12,13,17,18,19,20].

The aim of this study was to self-assess psychosexual functioning of women after breast cancer treatment.

Material and methods. The study was conducted in May 2009 among 103 women after breast cancer treatment. The research method was a diagnostic survey based on the author's questionnaire. The questionnaire was developed using the 5-point Likert scale, the chosen questions of the Beck Depression Inventory, and the author's questions giving women the possibility of describing more complex information on their psychosexual problems. The questions were created on the basis of Adachi, Elit et al.'s reports, and asked about escalation of depressive symptoms, self-acceptance of body image, attributes of femininity, the relationship with a partner, sexual intercourse, the feeling of being attractive, the received support, and breast self-examination as a method of prevention [3,20]. Our study complied with the rules of the Bioethical Commission of the Pomeranian Medical University in Szczecin. All women participating in the study were volunteers, they were anonymous and could resign from the study at any stage. Women were randomly chosen. There were no limiting factors of inclusion in the study. Some 137 questionnaires were sent to all members of the Amazons' Association in West Pomeranian Province, out of which 103 were correctly filled out and classified for analysis, while in 34 certain questions were omitted, which was the reason why they could not be subjected to analysis. It was assumed that some features such as the type of surgery, age, the place of residence, education, and marital status might affect women's perception of

themselves and their psychosexual functioning. Statistical analysis was done using the Pearson's chi-square test. A chosen significance level was α=0,05.

Description of the sample. The description was shown in table 1. Over a half of the surveyed (54%) were women aged 53-65, and 28% women aged 40-52. The youngest woman was 40, and the oldest – 79. The average age was 57 years ± 7.38. The majority of respondents (54.4%) came from a town of a population up to 100 thousand, and 15.5% from the country. Over a half of women (56.3%) had secondary and 5% primary education, 48.54% were retired, one-fifth (20.38%) were professionally active. Married women were most numerous and constituted 63.1%, and 36.9% were not married: misses, widows, divorcées. Two-thirds of women (66.03%) had partners.

Table 1 Description of the sample

No.	Feature	N	%
1.	age		
	40-52 years	29	28,15
	53-65 years	55	53,39
	66-79 years	19	18,44
	X+SD 57± 7,38	103	99,98
2.	Place of residence		
	town with a population over 100 thousand people	31	30,09
	town with a population up to 100 thousand people	56	54,36
	country	16	15,53
		103	99,92
3.	Education		
	primary	5	4,85
	vocational	19	18,44
	secondary	58	56,3
	higher	21	20,38
		103	99,97
4.	Professional activity		
	employed	21	20,38
	unemployed	19	18,44
	retired	50	48,54
	pension	13	12,62
		103	99,98

Most respondents fell ill and were operated in the years 2002 - 2008, the youngest person had surgery at the age of 35, the oldest – 73. The average age of the operated women was 48.25±1.09 (tab.2). The maximum time from a surgery in the group examined was 21 years, and the minimum – 1 year. Mastectomy was performed in 78.6% (n=81), a breast-sparing operation in 17% (n=15), and

mastectomy with reconstruction in 2.9%. There were also women who did not have surgery – 3.88%.

Table 2. The age of respondents on the operation day and on the day of the survey

Data of surgery			The average age of women			
			on the operation day		on the day of the survey (2008)	
	N	%	X	SD	X	SD
1988-1994	8	7,76	48,89	8,81	67,22	7,81
1995-2001	40	38,8	51,55	7,39	59,3	8,21
2002-2008	51	49,5	51,56	6,98	54,88	7,1
no surgery	4	3,88	41	6,22	46,75	7,41
Total	103	100	48,25	1,09	57,04	0,48

Results. The women were asked about their self-acceptance before they got ill. The vast majority of women (71%) accepted themselves as they were. Before the disease was diagnosed, 65% regarded themselves pretty (answers “yes” and “rather yes”). One-fourth of women (25.24%) had no opinion about their appearance. Less than two-third of women who described themselves as pretty thought that they were attractive to others (61.5%). Women who had no poinion about their appearance in most cases (61.53%) did not think they were attractive to others (tab.3).

Table 3. Self-assessment of attractiveness

Are you pretty?	N	%	Are you attractive to others									
			yes		rather yes		rather not		no		I don’t know	
			N	%	N	%	N	%	N	%	N	%
yes	26	25,24	16	61,5	10	38,46	-	-	-	-	-	-
rather yes	41	39,88	5	12,19	31	75,6	-	-	-	-	5	12,19
rather not	6	5,82	-	-	2	33,33	3	50	-	-	1	16,66
no	4	3,88	1	25	-	-	2	50	1	25	-	-
I don’t know	26	25,24	1	3,84	9	34,6	-	-	-	-	16	61,53
Total	103	100,1	23	22,33	52	50,48	5	4,85	1	0,97	22	21,35

$\rho>0,05$

No correlation was found between women’s self-assessment of body image before getting ill and the feeling of being pretty ($\alpha<\rho$). After surgery over a half of respondents (57%) felt still attractive

as sexual partners and as women. Some 43% thought that breast removal made them less attractive as sexual partners. Breasts are commonly regarded as an attribute of femininity. According to 33.98% of the surveyed women an attribute of femininity was breast, 28.15% - face, and 21.35% - other parts of the body such as neck, eyes, waist, complexion, and a fine figure (fig.1).

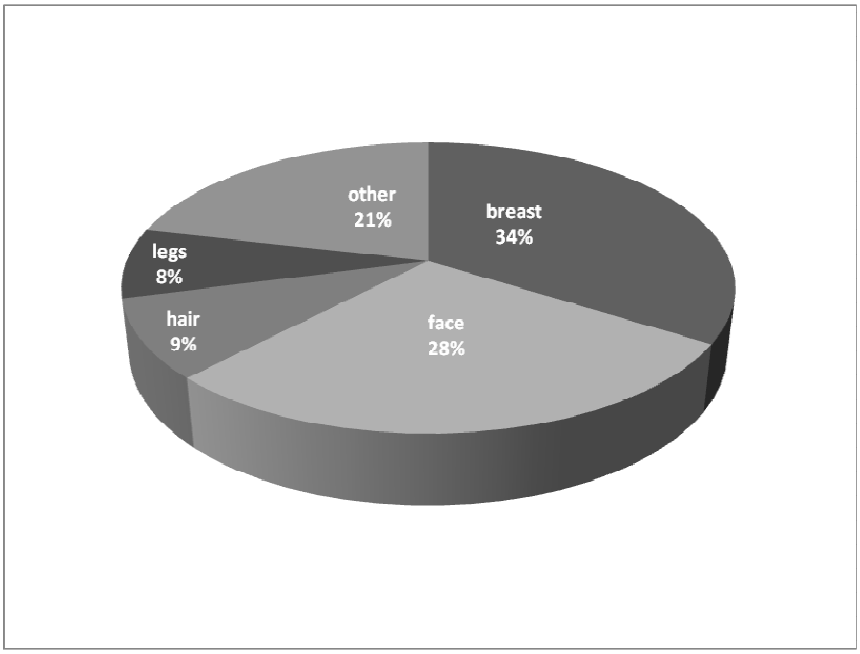

Fig. 1 Attributes of femininity

In the opinions of 27% of women, breast are an important erogenous area for their partners, while 55.3% of women could not give an explicit answer (answers “rather yes”, “rather no”). Satisfying sexual life is a significant part of any relationship. That is why we analysed self-assessment of the relationship with husbands or partners before getting ill and the importance of sexual intercourse for women. About 42.71% described their relationship with husbands or partners before the disease as satisfactory, more than one-fourth (26.21%) as very good. Every tenth woman (10.67%) assessed the relationship with a partner as bad. One-fourth of women (26.2%) reagarded sexual intercourse important, 14.6% said it had rather no meaning or had no meaning at all (4.85%). (tab.4).

Table 4. The relationship between partners and the importance of sexual life before the diagnosis of breast cancer

Relationship between partners before the disease	Total		Importance of sexual life before disease									
			Very important		Important		Rather not important		Not important at all		I have no opinion	
	N	%	N	%	N	%	N	%	N	%	N	%
very good	27	26,21	9	33,33	13	48,14	2	7,4	-	-	3	11,11
satisfactory	44	42,71	13	29,54	21	47,72	6	13,63	2	4,5	2	4,5
unsatisfactory	14	13,59	3	21,42	4	28,57	4	28,57	-	-	3	21,42
bad	11	10,67	2	18,18	1	9,09	3	27,27	3	27,27	2	18,18
I have no partner	7	6,79	-	-	-	-	-	-	-	-	7	100
	103	99,97	27	26,2	39	38,1	15	14,56	5	4,85	17	16,5

The diagnosis of cancer is always difficult to cope with emotionally. Women experience different feelings. In the group examined, the most dominant feelings were terror – 38% and fear of death – 24.3%. Some 18.4% of women felt irritation, 14.6% - depression, and 13.6% - anger. Answering the open question, 3.8% of respondents mentioned also their motivation to take up the therapy and act immediately in spite of fear. No correlation was proved between professional activity or age and the demonstrated feelings (ρ=0.155). Nearly half of women (48.5%) found it difficult to look at themselves naked - „they try to avoid looking in the mirror, they change clothes in closed rooms" (answers "yes" -23.3% and "rather yes" – 25.4%). Some 42.7% of women looked at their bodies without negative emotions, and 3.8% did not think about it. About 37.9% of women felt deeply embarrassed in the presence of their partners, and one-fourth (25.24%) did not feel so (tab.5).

Table 5. Self-acceptance of the body vs. showing naked to the partner after mastectomy

Looking at oneself naked is difficult	Total		Have your husband/partner seen you undressed?					
			Yes		No		Not yet	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
yes	24	23,3	17	70,83	7	29,16	-	-
rather yes	26	25,24	21	80,76	5	19,23	-	-
rather not	19	18,44	16	84,2	2	10,52	1	5,26
no	25	24,27	21	84	3	12	1	4
I don't think about it	9	8,73	-	-	9	100	-	-
Total	103	99,98	75	72,81	26	25,24	2	1,94

ρ>0,05

No correlation was found between women's acceptance of their bodies and showing naked to

partners (α<ρ), there was however a weak statistical correlation between a type of surgery and showing to a partner undressed (tab. 6).

Table. 6 Effects of a type of surgery on showing undressed

	Showing undressed			
A type of surgery	Yes	No	Not yet	Altogether
Mastectomy	60.42% (58)	15.63% (15)	1.04% (1)	77% (74)
Breast-sparing operation	15.63% (15)	-	-	15.63% (15)
No surgery	2.08% (2)	1.04% (1)	1.04% (1)	4.17% (4)
Mastectomy with reconstruction	2.08% (2)	1.04% (1)	-	3.13% (3)
Total	80.21% (77)	17.17% (17)	2.08% (2)	100% (96)

ρ<0.05

Over a half of women who had a close relatioship with men (54%) did not notice any changes in their partners' behaviour during intimate contacts, one-fifth (21%) claimed that their relationship improved („they are more tender to each other") than before surgery. Whereas 14% of women from this group avoided intimate situations, and 11% have not had sexual intercourse since operation. A moderate statistically significant correlation (ρ=0.002) was observed between the importance of sex in the partnership before diagnosis of the disease and the feeling that something changed between partners in intimate situations (tab. 7).

Table. 7 The importance of sexual life before getting ill and the feeling that something changed in intimate contacts after therapy

Importance of sexual life	Changes in intimate contacts				
	Nothing changed	More tenderness	Avoiding sexual contacts	I have not decided to have sexual intercourse	Altogether
Rather important	18.95% (18)	12.63% (12)	3.16% (3)	2.11 (2)	36.84% (35)
Important	16.84% (16)	6.32% (6)	2.11% (2)	2.11% (2)	27.37% (26)
I have no opinion	8.42% (8)	1.05% (1)	3.16% (3)	2.11% (2)	14.74% (14)
Rather unimportant	9.47% (9)	1.05% (1)	2.11% (2)	-	12.63% (12)
Unimportant	1.05% (1)	-	3.16% (3)	4.21% (4)	8.42% (8)
Total	54.74% (52)	21.05% (20)	13.63% (13)	10.53% (10)	100% (95)

ρ<0.05

Partners for whom sexual life was important showed more affection to each other. When asked about their feelings while sexual intercourse, 33% of women regardless of their age mentioned pleasure, and 29% affection. Particular warmth and closeness accompanied sexual contacts of every fifth woman (20%). Some 18% of the surveyed felt that they were still desired and attractive to their partners. Less than every tenth woman (9.2%) was ashamed and as many women (9.2%) felt pain and anxiety during sexual contacts with partners. A moderate statistical correlation was found between a type of surgery and sensations while having sex (ρ=0.014).

More than a half of the surveyed women (57%) got used to living with the disease, while 13% still cannot accept the situation.

Discussion. Breast cancer is a severe disease, a disease whose treatment is difficult and produces dramatic effects on physical, mental and sexual spheres of a woman's life. The aim of this study was to present a woman's subjective feelings associated with her disease and its influence on her perception of herself and her relationship with a partner in terms of intimate contacts. Our results reveal the existing problem and an urgent need for further detailed research. Yalom wrote that breasts are not only a part of the body for women, but they have a symbolic meaning reflecting their desires [21]. Breasts decide about women's attractiveness, and arouse interest of men. They are also erogenous area playing an important part in sexual intercourse, and their size and shape have influence on women's mood. The majority of the surveyed women regarded breasts as an attribute of femininity and an important erogenous area, therefore mastectomy resulted in their reluctance to show themselves undressed and a lack of body self-acceptance. Mika demonstrated that the majority of women's mental problems manifested as the feeling of being „half women", which was a result of losing a breast treated as a symbol of femininity and maternity [14]. Also Adachi et al. proved that a type of surgery affected perception of the body and sexuality of Japanese women, and thus they are aspects which should be taken into consideration while deciding about treatment [3]. Mastectomy, aside from crippling physically, evokes also negative emotions and psychological

trauma. No guarantee of successful treatment, fear of death, and terror were experienced by one-third of our respondents. Hersh reported that stress caused by breast cancer diagnosis affected 45% of female respondents, who suffered from anxiety and depressive states [22]. He also suggested factors having an effect on trauma experience. And so, women with breast cancer coming from small towns, with a lower level of education, and those from poor and neglected communities, as well as menopausal women experienced much greater trauma. They often retreated into themselves, and their psychosocial disorders associated with fear, helplessness and a lack of hope for recovery became more intense [21]. Surgery negatively affected the feeling of attractiveness and acceptance of the body – almost a half of the surveyed women did not accept themselves undressed. Similar results about a lack of self-acceptance undressed were reported by Chwałczyńska, who surveyed 107 mastectomized women aged 40-75 years [17]. Only few women fully accepted the situation and described the state of their bodies as perfect, which could result from their better mental condition and the feeling of being loved and accepted. Most respondents had sexual intercourse which gave them the feeling of warmth, tenderness and desire. Sex was important for the surveyed women and the feelings which usually accompanied women during intimate contacts were warmth, tenderness, pleasure and desire. Karabulut and Erci, on the other hand, proved only little satisfaction with sexual life reported by 123 women after mastectomy [24]. In our research over a half of women claimed that their experience related to the disease and consequences of therapy had positive impact on their relationships. They felt very close to their partners, regarded themselves attractive and desired. Fobiar et al. surveyed 549 women aged 22-50 who had been operated for breast cancer. They showed that a half of them had problems with perception of their bodies and sexual contacts [22]. In our research every tenth woman in the surveyed group experienced such emotions as irritation, anger, sorrow and terror.

Conclusion:

1. In the relationships where partners were emotionally close to each other before a woman's disease and where sex was important, the quality of sexual intercourse improved. A factor which contributes to successful sexual life of a woman is her acceptance of her body and the feeling of being attractive.
2. Negative emotions related to fear of death, the stereotype of feminity, and the feeling of being „half women" considerably affect self-assessment of mastectomized women. Therefore, women after breast cancer treatment should be encouraged to use various forms of social support.

References:

[1] Wronkowski Z, Chmielarczyk W, Zwierko M. Nowotwory złośliwe piersi. Zagrożenie populacji polskiej. *Służba Zdrowia* 2000; 3: 24–26.
[2] Clayton AH. Outcomes in Brest cancer: disease and treatment effects on mood and sexual. *Primary Psychiatry* 2006; 49(17): 5093–5109.
[3] Adachi K, Ueno T, Fujioka T, Fujitomi Y, Ueo H. Psychosocial factors affecting the therapeutic decision-making and postoperative mood states in Japanese breast cancer patients who underwent various types of surgery: body image and sexuality. *Jpn J Clin Oncol* 2007;37(6): 412–418.
[4] Eisen A, Lubinski J, Klijn J, et al. Breast Cancer Risk Following Bilateral Ophorectomy in *BRCA1* and *BRCA2* Mutation Carriers: An International Case-Control Study. *J Clin Oncol* 2005; 23: 7491–6.
[5] Chen S, Parmigiani C. Metaanaliza penetracji BRCA1 i BRCA2. *J Clin Oncol* 2007; 6: 390–395. http://jco.ascopubs.org/content/25/11/1329.full.pdf.pl
[6] Pasini W. Psychosexual problems after cancer: an example of breast cancer. *Drugs of Today* 2002; 38: 101.
[7] Jabłoński M, Furgał M, Dudek D, Zieba A. Miejsce psychoonkologii we współczesnej psychiatrii. *Psychiatria Polska* 2008, t. XLII; 5: 749-765.
[8] Holland J.C, Goone-Piels J. Anxiety Disorders. In: Kufe D, Pollock R, Weichselbaum R, Bast R, Gansler T, Holland J, Frei E. (red.). Cancer Medicine. Wyd. 6. BC Decker, Hamilton (Canada) 2003.
[9] Bukovic D, Fajdic J, Hrgovic Z, Kaufmann M, Hojsak I, Stanceric T. Sexual dysfunction in breast cancer survivors. *Onkologie* 2005; 28(1): 29–34.
[10] Currin J, Meister EA. A Hospital-based Intervention Using Massage to Reduce Distress Among Oncology Patients. *Cancer Nursing* 2008; 3, vol.31: 214–221.
[11] Araszkiewicz A., Bartkowiak W., Starzec W.: Zaburzenia lękowe w chorobie nowotworowej. *Psychiatria w Praktyce Ogólnolekarskiej* 2004;4, T.4: 157-166.
[12] Bonnema J, van Wersch AM, van Geel AN, Pruyn JF, Schmitz PI, Paul MA, Wiggers T. Medical and psychosocial effects of early discharge after surgery for breast cancer: randomised trial. *BMJ* 1998; 316 (7140): 1267–1271.
[13] Kalaitzi Ch, Papadopoulos VP, Michas K, Vlasis K, Skandalakis P, Filippou D. Combined psychosexual intervention after mastectomy: Effects on sexuality, body image, and psychological well-being. *J of Surgical Oncology* 2007; 96(3): 235–240.
[14] Rowland J, Desmond KA, Meyerowitz BE, Belin T, Wyatt GE, Ganz PA. Role of breast reconstructive surgery in physical and emotional outcomes among breast cancer survivours. *J of the National Cancer Institute* 2000;17,vol.92:1422–1429.
[15] Tsirigotis K., Gruszczyński W. Wybrane zagadnienia z życia psychoseksualnego chorych na schizofrenię. *Seksuologia Polska* 2007;5, 2:51–56.
[16] Charavel M, Bremond A, Courtial I. Psychosocial profile of women seeking breast reconstruction. *Eur J Obstet Gynecol Reprod Biol* 1997; 74(1): 31–35.
[17] Chwałczyńska A, Woźniewski M, Rożek-Mróz K, Malicka I. Jakość życia kobiet po mastektomii. *Wiadomości Lekarskie* 2004;LVII:5–6.
[18] Anllo LM. Sexual life after Brest cancer. *J of Sex&Marital Therapy* 2000; 26: 241–248.

[19] Zanapalioglu Y, Atahan K, Gur S, Cokmez A, Tarcan E.: Effect of Brest conserving surgery in Quality of life in breast cancer patients. *The J of Breast Health* 2009; 3: 152–156.
[20] Elit L, Esplen MJ, Butler K, Narod S.: Quality of life psychosexual adjustment after prophylactic oophorectomy for a family history of ovarian cancer. *Familial Cancer* 2001: 3–4: 149–156.
[21] Yalom M. *A History of the Breast*. New York: Alfred A. Knopf 1997.
[22] Hersh SP.: Psychological Aspects of Patients with Cancer. Philadelphia– Toronto; 1982:55-78.
[23] Karabulut N, Erci B. Sexual desire and satisfaction In: Sexual life affecting factors in brest cancer survivors after mastectomy. *J Psychosoc Oncol*. 2009;27:333–343.
[24] Fobiar P, Stewart SL, Chang S, D'Onofrio C, Banks PJ, Bloom JR. Body image and sexual problems In Young women with Brest cancer. *Psychooncology*, 2006; 15(7): 579–594.

Address for correspondence:
Bożena Mroczek PhD
Zakład Zdrowia Publicznego Pomorski Uniwersytet Medyczny w Szczecinie
71-240 Szczecin, ul. Żołnierska 48
Tel. +48 91 48 00 920, Fax. +48 91 48 00 923, e-mail: b_mroczek@data.pl