

The influence of menopausal symptoms on women's sex life

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SUMMARY

Introduction. Women around the world suffer from ailments specific to the menopausal period, and the intensity and variety of menopausal symptoms depend on a negative attitude towards menopause as well as various aspects of a woman's personality and high level of stress.

The aim. The assessment of influence of menopausal symptoms on the quality of women's sex life in perimenopausal age.

Material and methods. The study group consisted of 200 women aged 45-55 years. The research was carried out in 2016 by the method of a diagnostic survey using own questionnaire.

Results. The most bothersome symptoms of menopause were: hot flushes (51%), fatigue (41%), weight gain (39%), drenching night sweats (35.5%), irritability (35.5%), palpitations (34.5%), decreased desire for sex (32.5%) and vaginal dryness (31.5%). The influence of menopausal symptoms on sex life was noticed by 43% of women from the study group. 52% of the respondents experienced a deterioration in the quality of sex life in the menopause when compared to the preceding period.

Conclusions. The factors that lower the satisfaction of sex life in the perimenopausal period are somatic menopausal disorders. Lowered satisfaction of sex life is an indication for treatment of menopausal disorders.

Key words: menopause; sex life; menopausal symptoms

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INTRODUCTION

Menopause from the Greek words „month” (*meno*) and „stop” (*pausis*) or „cease” means the permanent cessation of menstruation. It is a stage in a woman's life that indicates the end of the reproductive period. Menopause is diagnosed if there is no monthly bleeding within 12 months, and its absence does not result from any other organ or systemic pathology [1].

The age at which a woman goes through menopause is of great importance to her health. Menopause at an earlier age causes earlier ageing and therefore shorter life. Menopause is also a factor that increases the risk of cardiovascular diseases, stroke, obesity, osteoporosis and bone fractures. Menopause in older age increases the likelihood of hormone-dependent neoplasms, such as breast cancer and endometrial cancer [2].

The main reason for the occurrence of menopausal symptoms is the deficiency of estrogens, and more precisely the reduction of estrinol and estrone concentration by as much as half of the past values, and the concentration of estradiol drops down by 1/3. This change affects the reproductive organs, the brain, bones, the circulatory system, the urinary system, liver and skin [3].

Women around the world suffer from ailments specific to the menopausal period. The intensity and variety of menopausal symptoms according to the research depend on: a negative attitude towards menopause, various aspects of personality, including: high reactivity, neuroticism, negative self-esteem, catastrophic thinking, temperament, high level of stress and anxiety [4].

THE AIM

The assessment of influence of menopausal symptoms on the quality of women's sex life in perimenopausal age.

MATERIAL AND METHODS

The influence of menopausal symptoms on the quality of women's sex life in perimenopausal

age was assessed in the study. 200 women aged 45-55 were recruited to the study group. They were women working at the Gynecology and Obstetrics Clinic at the St. Jadwiga Królowa Province Clinical Hospital No. 2 in Rzeszów, patients of the Clinic of General Surgery and the Clinic of Internal Diseases, Nephrology and Endocrinology with the Laboratory of Nuclear Medicine at the Province Clinical Hospital No.2 in Rzeszów, students of the University of the Third Age in Rzeszów, women improving their professional qualifications at the Postgraduate Education Centre for Nurses and Midwives in Rzeszow. The consent of December 2, 2015 of the Rzeszów University's Bioethics Committee was obtained to conduct research no. 11/12/2015 and the research was conducted in 2016. In this study, the research was carried out with the use of a questionnaire, constructed on the basis of the available literature on the subject.

The following inclusion criteria were used in the study: women's age 45-55, feminine gender, sexually active women, signing an informed consent form to conduct the study.

The exclusion criteria included: lack of consent to participate in the study, age of women over 55 and under 45, recognition of diseases that may have a negative influence on the results of the assessed parameters, e.g. re-

moval of the uterus, perineoplasty, removal of the ovaries, disorders in the statics of the reproductive organ, removal of the body of the uterus, breasts removal.

All the respondents were informed about the topics undertaken during the research, the purpose of the research, the possibility of withdrawing from the research as well as they were also assured of being completely anonymous. Then, the manner of providing answers to the given questionnaires was discussed as well as the manner of protecting anonymity by returning them in a sealed white envelope (leaving the envelope in a designated place).

Each set of questionnaires was marked with a number that was also indicated in the database. Initially, the data was encoded in the Excel spreadsheet in the form of numerical values in accordance with the adopted key.

For the purpose of this study, the following tests were used for questions on nominal scales to assess the correlation between the selected variables: Cramer's V (tables 2x3, 4x5 etc.), Phi (tables 2x2) - these are symmetrical measures based on the chi-square test, informing about the strength of the dependencies between variables in crosstabs. All measures of correlation strength are normalized so that to take values in the range (0-1). So, respectively, from 0-0.29

Tab. 1. The most bothersome menopausal symptoms

Menopausal symptoms *	n	%
Headache	54	27,0
Drenching night sweats	71	35,5
Hot flushes	102	51,0
Palpitations	69	34,5
Sleep disorders	58	29,0
Fatigue	82	41,0
Concentration problems	38	19,0
Mood swings	59	29,5
Irritability	71	35,5
Failing memory	42	21,0
Dizziness	17	8,5
Lower sexual desire	65	32,5
Vaginal dryness	63	31,5
Recurring urinary tract inflammation	15	7,5
Urinary incontinence	21	10,5
Weight gain	78	39,0
Loss of breasts firmness	33	16,5
Hair loss	12	6,0
Lower vulnerability od clitoris	5	2,5
Rare orgasms	11	5,5
Soreness while sexual intercourse	22	11,0
Intensified desire for sex	3	1,5
Vomit	0	0,0
Constipation	18	9,0
Diarrhoea	1	0,5
Dry mouth	7	3,5
Others	6	3,0

n - number of observations; % - percent; * - possibility to indicate several answers
Source: own study

- weak correlation, 0.30-0.49 - moderate correlation, 0.5-1 - strong correlation [5]. Descriptive statistics were calculated for numerical variables, i.e. median, first and third quartile. The Mann-Whitney U test was used to assess the differences in the average level of a numerical feature in two populations. The level of statistical significance was $p < 0.05$. The statistical analysis of the collected material was performed in the Statistica 13.1 package.

RESULTS

The median for the age of the women in the study group was 50. Among the respondents there were 111 women (55.5%) living in the countryside, 38 women (19%) living in the city with a population of up to 100,000 inhabitants and 51 women (25.5%) living in the city with a population of over 100,000 inhabitants. The majority of the surveyed women perceived themselves as religious Catholics (94%). In the study group, the vast majority were married women (94%). The education of women in the study group was varied. Most respondents from this group had secondary education (64 people

- 32%) or higher education with master's degree (57 people - 28.5%).

The most bothersome symptoms of menopause indicated by the women from the study group were: hot flushes (102 people - 51%), fatigue (82 people - 41%), weight gain (78 people - 39%), drenching night sweats (71 people - 35.5%), irritability (71 people - 35.5%), palpitations (69 people - 34.5%). These symptoms also included: decreased desire for sex (65 people - 32.5%) and vaginal dryness (63 people - 31.5%) (Tab.1.). Other symptoms listed by the respondents included haemorrhoids and depression.

The study showed a statistically significant difference between the percentage of menstruating and non-menstruating women complaining of such menopausal symptoms as hot flushes ($p < 0.001$), failing memory ($p = 0.005$), vaginal dryness ($p = 0.006$) and soreness during intercourse ($p = 0.035$). More often, these symptoms were statistically most bothersome according to the non-menstruating respondents if compared to the menstruating ones (Tab.2.).

The influence of menopausal symptoms on sex life was noticed by 86 women (43.0%) from the study group (Tab.3.).

Tab.2. Menopausal symptoms indicated as the most bothersome among menstruating and non-menstruating women in the study group

Menopausal symptoms *	Menstruating women		Non-menstruating women		Significance (p)
	n	%	n	%	
Headache	20	26,0	34	27,6	$\chi^2(1)=0,06$ $p=0,795$
Drenching night sweats	32	41,6	39	31,7	$\chi^2(1)=2,00$ $p=0,156$
Hot flushes	54	70,1	48	39,0	$\chi^2(1)=18,33$ $p < 0,001$ $\Phi = -0,30$
Palpitations	27	35,1	42	34,2	$\chi^2(1)=0,01$ $p=0,894$
Sleep disorders	23	29,9	35	28,5	$\chi^2(1)=0,04$ $p=0,830$
Fatigue	32	41,6	50	40,7	$\chi^2(1)=0,01$ $p=0,898$
Concentration problems	17	22,1	21	17,1	$\chi^2(1)=0,77$ $p=0,380$
Mood swings	20	26,0	39	31,7	$\chi^2(1)=0,74$ $p=0,386$
Irritability	25	32,5	46	37,4	$\chi^2(1)=0,50$ $p=0,478$
Failing memory	24	31,2	18	14,6	$\chi^2(1)=7,80$ $p=0,005$ $\Phi = -0,19$
Dizziness	5	6,5	12	9,8	$\chi^2(1)=0,64$ $p=0,420$
Lower sexual desire	29	37,7	36	29,3	$\chi^2(1)=1,52$ $p=0,217$
Vaginal dryness	33	42,9	30	24,4	$\chi^2(1)=7,48$ $p=0,006$ $\Phi = -0,19$
Recurring urinary tract inflammation	8	10,4	7	5,7	$\chi^2(1)=1,50$ $p=0,219$
Urinary incontinence	7	9,1	14	11,4	$\chi^2(1)=0,26$ $p=0,607$
Weight gain	28	36,4	50	40,7	$\chi^2(1)=0,36$ $p=0,545$
Loss of breasts firmness	13	16,9	20	16,3	$\chi^2(1)=0,01$ $p=0,908$
Hair loss	5	6,5	7	5,7	$\chi^2(1)=0,05$ $p=0,816$
Lower vulnerability of clitoris	3	3,9	2	1,6	$\chi^2(1)=1,00$ $p=0,317$
Rare orgasms	6	7,8	5	4,1	$\chi^2(1)=1,26$ $p=0,260$
Soreness while sexual intercourse	13	16,9	9	7,3	$\chi^2(1)=4,42$ $p=0,035$ $\Phi = -0,14$
Intensified desire for sex	2	2,6	1	0,8	$\chi^2(1)=1,02$ $p=0,312$
Vomit	9	11,7	9	7,3	$\chi^2(1)=1,10$ $p=0,293$
Diarrhoea	0	0,0	1	0,8	$\chi^2(1)=0,62$ $p=0,427$
Dry mouth	3	3,9	4	3,3	$\chi^2(1)=0,05$ $p=0,809$
Others	2	2,6	4	3,3	$\chi^2(1)=0,06$ $p=0,791$

n - number of observations; % - percent; χ^2 - Pearson chi-square test result; p - level of significance of differences

During the menopause, 58 of the respondents (29%) experienced their children leaving their home, 40 women (20%) experienced changes in their intimate life, 29 women (14.5%) experienced death of a family member and 19 women (9.5%) experienced serious changes in the material status (Tab.4.).

Diseases and accidents in the family were also mentioned by the respondents as other difficult life situations occurring during the menopause.

Most women in menopause period received support from their husband or partner (131 respondents - 65.5%) and less often from children (45 women - 22.5%), friends (39 people - 19.5%) or a gynaecologist (38 women - 19%) (Tab.5.).

Other people supporting the respondents during the menopause were also: friends (2 people – 1%), sister (2 people – 1%) and a friend (1 person – 0.5%). 7.5% of the women indicated no support from anyone.

The feeling of deterioration of the quality of sex life during the menopause if compared to the previous period was indicated by 104 respondents (52.0%) (Tab.6.).

Hormone replacement therapy was used by 13 women (6.5%) from the study group (Tab.7.).

In connection with the used hormone replacement therapy, the respondents experienced an improvement when it comes to the mood, a reduction in the occurrence of drenching sweats and hot flushes, an improvement in

Tab. 3. The influence of menopausal symptoms on the sex life of the study group

Variables	n	%
No	74	37,0
Yes	86	43,0
One does not know	40	20,0
Total	200	100,0

n - number of observations; % - percent

Tab. 4. Difficult life situations that occurred during the menopause

Variables*	n	%
Leaving home by children	58	29,0
The death of a family member	29	14,5
Serious changes in the material status	19	9,5
Changes in intimate life	40	20,0
Infidelity of a partner	8	4,0
Others	7	3,5

n - number of observations; % - percent; * - possibility to indicate several answers

Tab.5. Declaration of support in the menopausal period

Variables*	n	%
Husband/partner	131	65,5
Offspring	45	22,5
Friends	39	19,5
Gynaecologist	38	19,0
Others	20	10,0

n - number of observations; % - percent; * - possibility to indicate several answers

Tab.6. A feeling of deterioration in the quality of sex life during menopause compared to the previous period among women in the study group

Variables	n	%
No	96	48,0
Yes	104	52,0
Total	200	100,0

n - number of observations; % - percent

Tab.7. The use of hormone replacement therapy in the study group

Variables	n	%
No	187	93,5
Yes	13	6,5
Total	200	100,0

n - number of observations; % - percent

general well-being and alleviation of menopausal symptoms as well as increased vitality. However, they also indicated the occurrence of the problem of urinary incontinence.

DISCUSSION

The perimenopausal period occurs among women in Poland between the age of 47 and 51 [6]. The intensity as well as the duration of perimenopausal symptoms vary among women. Symptoms may appear as early as 5 years before menopause and continue to 5 years after the end of menstrual cycles [7]. It is estimated that symptoms may affect up to 75% of perimenopausal women [8]. The subject literature provides data confirming the presence of climacteric symptoms among 94% of women and their negative influence on daily functioning that concerns almost half of the respondents [9]. The regularity of particular menopausal symptoms varies in the subsequent phases of menopause. Jarecka noticed that perimenopausal and postmenopausal women suffer more from menopausal symptoms compared to non-perimenopausal women [10]. Similar results were obtained in own work presenting statistically significant difference between the percentage of women with and without menstrual periods complaining of menopausal symptoms, i.e. hot flushes, ($p < 0.001$), failing memory ($p = 0.005$), vaginal dryness ($p = 0.006$) and soreness during intercourse ($p = 0.035$). Both research and clinical practice confirm that the most statistically bothersome symptoms were more common among women with absence of menstruation.

The research material analysed by the authors demonstrates that predominantly bothersome symptoms of menopause were: hot flushes 51%, weight gain 39%, excessive night sweats 35.5%, palpitations 34.5%. Importantly, Krajewska et al. who assessed the severity of menopausal symptoms taking into consideration Polish, Belarusian and Greek women, pointed out that by far higher percentage of the surveyed women felt menopausal symptoms. The symptoms that occurred most commonly among the respondents were: hot flushes (96.4%) and excessive irritability (96%) [11]. By comparison, different conclusions were reached by Barnaś et al., where among 336 menopausal women aged 45-65 years (55 years on average) the most often occurring symptoms of this period were: hot flushes (81.8%), over excitability (81.5%), sleep disorders (81.5%) and anxiety (81.2%). Moreover, night sweats, occurring in 63.1% of

the respondents, appeared as a bothersome symptom as well [12]. Admittedly, the analysis of the available literature leads to different assumptions in terms of menopausal symptoms according to Makara-Studzińska et al., so that the most typical symptoms among women aged 45-65 were: depressive mood (82.7%), discomfort associated with joints and muscles (82.4%), physical and mental fatigue (82.4%) and irritability (81.9%). The highest intensity of hot flushes occurs among women aged 51-55 and 56-60. Significantly, in this case symptoms intensified with age. It was also noted that there are statistically significant differences in the intensity of bladder problems ($p = 0.022$) muscular and joints discomfort ($p = 0.003$) [13]. It turns out that Lewicka et al. research results are divergent with the research results obtained by the authors of the study. More precisely, it appears that the most recurring menopausal symptoms were: nervousness, irritation, occasionally aggression (81%), bad mood, mood changes and sadness (64%) [14]. In turn, other studies carried out by Lewicka et al., indicate that vast number of women suffered from sleep disorders (62%), mood swings (71.2%), nervousness (72%), depression (57.5%), fatigue (70%) and concentration problems (56.5%) [15]. The authors obtained considerably diminished results when it comes to mood swings so that 29.5% of women complained about these symptoms. Other symptoms were: 35.5% irritability, sleep disorders 29%, fatigue 41%. The research carried out by Gardziejewska et al., proves that women also suffer from other climacteric symptoms, specified by the authors of the study. The ailments experienced by women can be presented as follows: 12% over excitability or irritability, 8% headaches and dizziness, 6% concentration problems, 5% urinary incontinence. 1% of women mentioned other ailments that appeared during the menopause, i.e. heavy periods, palpitations and breasts pain [16]. The inescapable conclusion which emerges from Jarecka's research is that women who experience more menopausal symptoms are less satisfied with their relationships ($p = 0.001$) [10].

Importantly, the most regular symptom of perimenopause are hot flushes by far. Likewise, the research of Blümel et al., carried out among 8373 women from Central America, proved that 50% of respondents complained of hot flushes [17]. Corresponding results were also presented by Al Dughaiter et al., where 47.1% of the respondents suffered from hot flushes

and sweating [18]. In turn, hot flushes were observed in only 58.0% of surveyed women in China. The highest incidence of hot flushes and sweating reaching 97% was reported in Turkey in 2011 and 83% in Australia in 2011 [19].

According to own material, 32.5% of the respondents felt lower sexual desire. Similarly, Nappi et al., claimed that 35.0% of menopausal women noticed the decrease in libido. Other frequently reported symptoms were: mood swings (37%), depression (25%) and vaginal dryness (21%) [20]. According to the authors of the study vaginal dryness was reported by 31.5% of respondents. On the other hand, Peeyanjarassri et al., found that from 17% to 55% of perimenopausal women experienced vaginal dryness during intercourse [21]. It is clearly apparent that the symptoms increase with the age of the surveyed women [8,13].

The next research stage confirmed that menopausal symptoms considerably affect the sex life of the surveyed group (43%). Many literature sources confirm the data obtained by the authors according to which perimenopausal women struggle with sexual disorders and feeling unattractive, therefore the evaluation of life is rather negatively estimated by them [1]. The research carried out by Lewicka et al., proved that women experiencing more severe menopausal symptoms presented more negative attitude towards partners and that in turn significantly affected their attractiveness [14]. The above mentioned conclusion is confirmed by the results of the research carried out on 286 women by Markwitz-Grzyb, according to which menopausal symptoms in general affect sex life. In a word, 32,6% of the respondents admitted no influence on sex life, whereas 23,5% - only limited influence. 16.5% of the surveyed women stated that menopausal symptoms had an average influence on their sex life and only 7% of them denied experiencing any influence of the symptoms on their sex life [22].

In the author's own research, during the menopause, women experienced various difficulties of life such as leaving home by offspring, changes in intimate life, the death of a family member, serious changes in material status. In the available literature one may find similar results confirming that the fundamental factor which influences middle aged women's sexual desire is stress, which in turn is mainly related to problems such as: leaving home by a son or a daughter (48%), the death of a family member (27.8%) and serious changes in material status [22]. According to Lew-Starowicz, 61.7%

of women aged 45 or more struggle with personal problems, 35% feel sexual dissatisfaction due to their partner's sexual dysfunction, 35% of women suspect their son of homosexual orientation and 27% deals with partner's infidelity [23].

The authors of the study found that the vast majority of menopausal women (65.5%), received support from a husband or partner, less frequently from children (22.5%), friends (19.5%) or a gynaecologist (19%). Some of them indicated lack of support, that is 7%. The results obtained by Markwitz-Grzyb are in compliance with the research of the authors of the study. To be more precise, from the group of 286 women in the perimenopausal period, as many as 77% of the respondents could rely on their husband / partner. Admittedly, only 9.9% of the respondents stated the change of the relation with a husband / partner, especially in the sphere of sex life [24]. Likewise, Szpak et al., claimed that 58% of men understand their partner's problems and try to be supportive during partner's climacterium, whereas 75% accepted this situation. In turn, almost every third respondent claimed that the problems of the perimenopausal period are a private issue of women. More than 20% of men declared that women's issues are too overwhelming [25]. According to Wrześniewski and Włodarczyk, a middle-aged person may require more support in comparison to a young person. Essentially, age might be a relevant factor which determines the type of expected support [26]. In the study by Błajda et al., as many as 43% of 300 respondents received no support during perimenopausal period [27]. The fact that women experience mild or severe symptoms has a destructive influence on family relations and relationships in general. In the work of Bień et al., the statistical analysis revealed that the respondents who experienced moderate or severe climacteric symptoms repeatedly received no support from family members ($p=0.001$), observed partner's insufficient commitment and reluctance to help ($p=0.04$), recognized adverse impact on communication among family members ($p=0.03$) and also claimed that family responsibilities were extended ($p<0.00001$) [28].

What is interesting, the deterioration of quality of sex life in perimenopausal period in comparison to the previous period was reported by 52% of the respondents. Similarly, corresponding conclusions were drawn by Gardziejewska et al., comparing the frequency of sexual intercourses before menopause. In general,

sexual intercourses were less regular among 65% of the respondents. As many as 6% of the surveyed women declared more frequent sexual intercourses in perimenopausal phase and 30% assured that the quality and quantity of sex life remained unchanged before and after menopause [16]. Yet another research was carried out by Carranza-Lira et al. who attempted to compare the sex life of premenopausal and postmenopausal women. Higher percentage of women were more sexually active compared to the postmenopausal period - 76.3%, 43.6%, respectively ($p < 0.001$) [29]. Lew-Starowicz et al. also maintained that after the age of 45 there is a considerable reduction in the frequency of intercourses (once every 3-6 months). The author contrasted it with the data from before the age of 45 when the number of intercourses was higher (every day or several times a week) [23].

Hormone replacement therapy was implemented by 6.5% of women from the study group. Moreover, the research by Henrykowska et al., proves that in the region of Łódź, Poland, the introduction of HRT is vastly more popular. Almost 30% of women aged 45-60 are

engaged in the therapy [30]. Consequently, the surveyed women experienced mood improvement, the reduction of excessive sweating, hot flushes, the enhancement of well-being in general, the relief of menopause symptoms and increased vitality. The implementation of hormone replacement therapy may reduce the intensity of hot flushes, improve the quality of functioning in the sexual sphere as well as the quality of sleep, alleviate depressive symptoms [31]. According to Henrykowska et al., women with frequent and severe climacteric symptoms generally apply hormone replacement therapy. It should be noted that the life satisfaction of women who did not decide to start the above mentioned therapy is comparatively lowered.

CONCLUSIONS

Somatic menopausal disorders are factors that lower sexual satisfaction in the perimenopausal period. Lowered satisfaction with sex life is an indication for the treatment of menopausal disorders.

REFERENCES

1. Janicka K. Jakość życia kobiet w okresie średniej i późnej dorosłości. *Acta Universitatis Lodzianensis. Folia Psychologica* 2014;18:67-84.
2. Bielawska-Batorowicz E. Psychologiczne aspekty menopauzy. Wyd. I. Wydawnictwo Naukowe PWN SA, Warszawa 2016.
3. Olszewska J, Czerwińska-Osipiak A, Łukaszuk K et al. Problemy kobiet w okresie okołomenopauzalnym. *Pielęg Pol.* 2015;1(55): 93-98.
4. Sakson-Obada O, Wycisk J. The body self and the frequency, intensity and acceptance of menopausal symptoms. *Prz Menopauz.* 2015;14 (2):82-89.
5. Nawojczyk M. Przewodnik po statystyce dla socjologów. Wydawnictwo SPSS Polska Kraków, 2002.
6. Pertyński T. Diagnostyka i terapia wieku menopauzalnego. Urban & Partner, Wrocław 2004.
7. Jarzabek-Bielecka G, Sowińska-Przepiera E, Pawlaczyk M. Aging and sexual activity: gynecological, sexological and psychological aspects. *Prz Menopauz.* 2012;6:487-489.
8. Nowakowska I, Rasińska R, Głowacka MD. Analiza związku objawów okołomenopauzalnych z funkcjonowaniem zawodowym i poczuciem satysfakcji z życia -subiektywne postrzeganie zależności przez kobiety w wieku 40+. *Med Pr.* 2015; 66 (3):351-358.
9. Genazzani AR, Schneider HPG, Nijland E. The European Menopause Survey 2005: What do women think right now about menopause and HRT? *Climacteric.* 2005;8(2):96.
10. Jarecka K. Jakość związku a objawy menopauzalne u kobiet i andropauzalne u mężczyzn. *Pol Forum Psychol.* 2017;22(2):219-241.
11. Krajewska K, Krajewska-Kuśak E, Heineman L et al. Comparative analysis of quality of life women in menopause period in Poland, Greece and Belorussia using MRS scale. Preliminary report. *Adv Med Sci-Poland.* 2007; 52:140-143.
12. Barnaś E, Penar-Zadarko B, Lubera K. Znajomość alternatywnych metod łagodzenia dolegliwości menopauzalnych. *Ann. Univ. Mariae Curie-Skłodowska.* 2006;LX, Supl. XVI:78-81.
13. Makara-Studzińska M, Kryś-Noszczyk K, Jakiel G. The influence of selected socio-demographic variables on symptoms occurring during the menopause. *Prz Menopauz.* 2015;14 (1):20-26.
14. Lewicka M, Goch E, Sulima M et al. Evaluation of mutual attraction and partnerships during menopause. *J Public Health, Nurs Med. Resc.* 2016; 4:16-20.
15. Lewicka M, Bąk M, Kanadys K et al. Korzystanie z używek przez kobiety w okresie klimakterium. *Pielęg XXI w.* 2009;4:47-52.
16. Gardziejewska A, Różańska-Kohsek A, Zalewski M et al. Seksualność kobiet w okresie klimakterium. *Med Og Nauk Zdr.* 2014;20 (4):400-404.
17. Blümel JE, Chedraui P, Baron G et al. A large multinational study of vasomotor symptom prevalence, duration, and impact on quality of life in middle-aged women. *Menopause.* 2011;18:778-785.
18. AlDughaiter A, AlMutairy H, AlAteeq M. Menopausal symptoms and quality of life among Saudi women visiting primary care clinics in Riyadh, Saudi Arabia. *Int J Womens Health.* 2015;7: 645-653.
19. Chen R, Yu Q, Xu KH et al. Survey on characteristics of menopause of Chinese women with the age of 40-60 years at gynecological clinic from 14 hospitals. *Zhonghua Fu Chan Ke Za Zhi.* 2013;48(10):723-727.
20. Nappi RE, Nijland EA. Women's perception of sexuality around the menopause: Outcomes of a European telephone survey. *Eur J Obstet Gynecol Reprod Biol.* 2008; 137(1):10-16.
21. Peeyananjarasri K, Cheewadhanaraks S, Hubbard M et al. Menopausal symptoms in a hospital-based sample of women in southern Thailand. *Climacteric.* 2006;9 (1):23-29.

22. **Markwitz-Grzyb N.** Women's sexuality during menopausal transition. *Med News.* 2013;82 (6):433-438.
 23. **Lew-Starowicz Z, Szymańska M.** Zaburzenia seksualne i problemy osobiste kobiet powyżej 45. roku życia. *Prz Menopauz.* 2010;9 (6):381-384.
 24. **Markwitz-Grzyb N.** Źródła wsparcia dla kobiety w rozwiązywaniu problemów wywołanych klimakterium. *Now Lek.* 2012;81(3):197-202.
 25. **Szpak R, Folwarczny W, Droszdzol A et al.** Relacje partnerskie w okresie klimakterium. *Ginekol Pol.* 2010; 81(2):115-119.
 26. **Wrześniewski K, Włodarczyk D.** Rola wsparcia społecznego w leczeniu i rehabilitacji osób po zawale. W: Sęk H, Cieślak R. (red.). *Wsparcie społeczne, stres i zdrowie.* PWN, Warszawa 2006:170-189.
 27. **Błajda J, Barnaś E, Pieniążek A et al.** Wybrane parametry stanu bio-psycho-społecznego kobiet w okresie okołomenopauzalnym. *Pol Prz Nauk Zdr.* 2016;3(48): 216-222.
 28. **Bień A, Rzońca E, Pańczyk-Szeptuch M.** Życie i funkcjonowanie kobiet w okresie przekwitania. *Gerontol Pol.* 2017;25:12-19.
 29. **Carranza-Lira S, Casillas Núñez FD.** Sexual dysfunction prevalence in a group of pre- and postmenopausal Mexican women. *Menopause Rev.* 2018;17(1):39-42.
 30. **Henrykowska G, Dziedziczak-Buczyńska M, Śmigieński J et al.** Wpływ stosowania hormonalnej terapii zastępczej na samoocenę stanu zdrowia fizycznego i psychicznego wśród kobiet łódzkich. *Probl Hig Epidemiol.* 2009;90 (4):556-560.
 31. **Jarząbek-Bielecka G, Mizgier M, Wilczak M et al.** Seksalność osób otyłych ze szczególnym uwzględnieniem okresu przekwitania. *Pol Prz Nauk Zdr.* 2015;4(45):267-270.
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