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ORIGINAL ARTICLE

Determinant factors of health in rural women in their perimenopausal period

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Abstract

The environment and lifestyle are known to exert an essential influence on the health of rural women in their perimenopausal period.

Objective: To assess the determinant factors of health in rural women in their perimenopausal period.

Material and methods: The study was carried out in 150 patients of the Gynecological Clinic of the Independent Public Heath Care Team (IPHCT) in Tomaszów Lubelski, southestern Poland, between 1 August 2010 – 30 April 2011. The women, aged 40-60 years, lived in a rural environment or villages. The study used a Menopause Health Questionnaire (MHQ) and Menopause Symptom Scale (MSS). Statistical analysis was based on Chi-Square Test, as well as U Mann-Whitney test, with a pertinence level of $p<0.05$. Data basis and statistics were collected using computer software STATISTICA 9.0 (StatSoft, Poland).

Results: More than a half of the investigated patients lived in the country (60.00%), with the remainder coming from villages (40.00%). About two-thirds of the patients (66.00%) had completed college education, and the majority stated that their financial situation was bad (30.00%), or average (32.00%). Only every fifth woman (19.33%) regularly had a gynecological check-up each year. Signs of anxiety or a depressive mood appeared to depend essentially (respectively: $p = 0.000$; $p = 0.02$) on the professional status of the women. Only every fifth woman (20.7%) showed an appropriate weight. Just over a half of the rural women (50.67%) declared having a job.

Conclusions: The professional status of rural women has a notable influence on their general well-being in the menopausal period. The majority of rural women hardly took care of their health or well-being. Worse (depressive) mood, irritability, frequent signs of anxiety, palpitation, heat strokes, and sexual disorders become important problems faced by women in the menopausal period.

Key words

menopause, rural women, health, determinant factors

INTRODUCTION

The perimenopausal period starts as soon as the appearance of endocrinological, biological and clinical lesions induced by menopause. Although it is a physiological woman's lifespan, it is often associated with numerous metabolic changes that determine the personal well-being and general health of a woman. All this is due to a range of metabolic lesions, brought about by the expiration process of the endocrinological function of the uterus. Changes in the hormonal status of a woman lead to numerous atrophic lesions occurring in estrogen-sensitive organs, such as the uterus, vagina, mammary glands and skin. Also, other clinical signs of that period are to be found in proleptic syndromes, such as heat strokes, headaches, drenching sweats, sleep disorders, reduced libido, and depression.

Climacterium triggers many unfavorable outcomes for general health. The first to occur are urogynecological (urinary bladder disorders), cardiovascular (hypertension, coronary disease, cardial infarction, apoplexy) ailments, as well as osteoporosis and atrophic lesions [1, 2].

A woman's mental state is negatively effected in the climacterium by such factors as: realizing the end of youth, another way of thinking of the ego (being personally attractive as a woman), departure of children from the home, departure of the husband, and changing socio-professional status, and at the same time, a notable worsening of the quality of sexual life, being the result of a change in a woman's biological, psychological and social functions [3]. This favours the origination or intensification of vital mental disturbances, e.g. depression [4].

In the life of younger women, the menopause results in premature senescence, becoming at the same time a factor that gives rise to the risk of many diseases; hence, the age of natural menopause not only becomes the index of the physiological aging process, but also that of the health of a population [5, 6, 7, 8].

The menopause age in Polish women appeared first in Stalyhvova's work of 1938, where she gave a rich illustration of the issue, pertaining to the ages of menarche and of menopause, as well as that of the reproductive period. The investigated group comprised 103 Polish women coming from poor environments, differing in their way of nutrition [9].

Beginning in the first half of the 20th century, medical circles and women became interested in the menopause, and respective literature accounts for more and more instances of menopause appearing at an increasingly older age, and differences in age at menopause between urban and rural women became notable [7, 9]. Studies completed by Bocheńska in a group of women from Cracow confirmed the extending lifespan until the appearance of the natural

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menopause. It is noteworthy that the average age of natural menopause observed for the residents of Cracow was 49.9 years in 1948, and in 1967 – 50.21 years; in the case of rural women from the neighborhood of Cracow, this amounted to 49.28 years, while in 1967, had already reached 50.49 years [9].

In women of different countries of the world, the menopause usually appears between the ages of 48 – 52 years. Hindu women experience menopause at a younger age – on average, 44.6 years, while French, Slovenian and Thai women at the older age of 52 years. In Polish women, the menopause age equals or differs in tenth parts from that of Australian, Czech, Finnish, Greek, Dutch, Japanese, Mexican, and Thai women. Compared to French, Slovenian and Thai women, they experience menopause a year earlier, and to Spanish and white women in the USA – 0.4 and 0.7 years earlier, respectively [5, 9].

Hormonal disorders appearing in the perimenopausal period enhance numerous lesions taking place in women's organisms, including metabolic disturbances, obesity, loosening of the immunological system, and homeostatic disorders. Consequently, the midwife, family physician and gynecologist should set priorities for taking care of each patient at that time. A yearly assessment of women's health would be welcome, and should deal both with the somatic and psychological aspects of the climacterium period, as well as with guidance for an appropriate lifestyle. An essential role should be played by education pertaining to diet, physical exercise, social relations, mental life hygiene, promotion of healthy behavior, use of medicines, as well as risk factors for a disease specific for that time [6, 8, 10, 11].

It should also be noted that vegetable compounds used in hormonal substitutive therapy have become known to soothe the effects of many menopausal symptoms. Apart from the best known isoflavones, there is also a range of other medicinal plants and herbs containing biologically-active compounds that may be considered potential therapeutical means for soothing and/or preventing menopausal symptoms. There are a growing number of reports on the healing properties of plants from the Agrimonia genus, including three species found in Poland: Agrimonia eupatoria L. (common agrimony), Agrimonia pilosa Ledeb. (hairy agrimony), and Agrimonia procera Wallr. (scented agrimony).

The healing properties of various agrimonia genera are important in the prevention and therapy of disturbances brought about by inflammatory reactions, and lesions developing in the cardio-vascular system. Therefore, the protection of this system at the time of decreasing estrogen hormone production has become one of the most important aspects of prevention and treatment of disorders induced by menopausal lesions in women [11].

The presented study aimed to assess the determinant health factors of rural women in their perimenopausal period.

MATERIAL AND METHODS

The study was carried out with patients in the Gynecological Clinic of the Independent Public Heath Care Group (IPHCG) in Tomaszów Lubelski, southeastern Poland, from 1 August 2010 – 30 April 2011. The research group (150 persons) consisted of women reporting for their gynecological tests. The women differed in age, place of residence (country, settlement), professional activity, material status, social status, and personal interests. They joined the study according to the following criteria:

– place of residence (country, settlement);
– age 40-60 years;
– informed consent to participate in the study.

The examination used the Menopause Health Questionnaire (MHQ) and the Menopause Symptom Scale (MSS). To obtain detailed data on the group of women, in the first part of the questionnaire they were asked 25 questions, 9 of which dealt with the socio-demographic characteristics of the examined group, while the remainder concerned the researched issue.

The respondents agreed to undergo an examination and fill autonomously the questionnaire. 155 questionnaires were given out, of which 150 were returned to the researcher and assessed as to the completeness of the answers provided, and then submitted to statistical analysis. Measurable figures were presented as mean values, standard deviation error and medians; non-measurable ones by using numerical and percentage values.

To assess the correlation between the examined features, the independence test and Chi-Square were used, and U Mann-Whitney test for the differences between the two groups. Relevance level $p<0.05$ was applied to point out statistically important differences or correlations. Data base and statistics were examined using computer software STATISTICA 9.0 (StatSoft, Poland).

Characteristics of the investigated group. The investigated group differed from the socio-demographic point of view. Given the place-territory of the examinations, it was decided to distinguish country from settlement. It is to be noted here that the district of Tomaszów is an area dominated by rural localities – villages and settlements. More than a half (60.0%) of the women lived in the country, and the others-in settlements (40.0%).

Additionally, the age of the women was taken into consideration. Accordingly, four age groups were adopted for a more intelligible interpretation of the results. The most numerous were women aged 56-60 years (36.0%) and 51-55 years (30.0%); the second consisted of those aged 46-50 (20.7%), with the smallest group aged 41-45 years (13.3%).

About two-thirds of the women (66.0%) had completed secondary education, followed by a smaller group with elementary education (13.0%), then women with basic vocational education (10.7%), while only every tenth woman (10%) had a higher education.

The great majority of the women were married (80.0%), while the rest (10.7%) had a free status – those who were single (6.0%) and widows (3.3%).

Only just over a half of the women (50.7%) remained professionally active; over one quarter (27.3%) declared themselves unemployed, and one fifth (20%) as retired. Only 3 women (2%) reported having acquired pension rights.

Almost every third woman stated her financial status as bad (30.0%) or mediocre (32.0%). Every seventh woman (14.7%) stated her financial status as being very good, and every fourth (23.3%) stated it to be good.

For a better illustration of the health situation of the women, their body mass index (BMI) was also considered. Accordingly, the women were divided into four groups (Fig. 1).

Overweight women appeared to be the most numerous group – 54.0%, while only 20.7% had the correct BMI (20-25). The others had a BMI value below 20 (13.3%) or above 30 (12.0%).

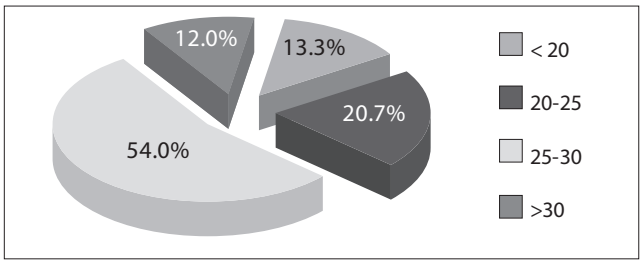

Figure 1. Body mass index (BMI) of the examined women

RESULTS

In the examined women the menopause median amounted to 50.59 years for the sample of 68 of those who no longer menstruated, while the menarche median was 12.21. In all the women, the menarche appeared between the ages of 11 – 15 years. More than two fifths (41.33%) of the women declared their menstruation to appear in the 12th, and just over one fourth (28.61%) in the 13th year of their life.

The functional well-being of rural women appeared as the ability to take part in an activity determined at work and rest.

The presented study accounts for the effect of age on professional activity. The women were divided into four age categories, with their professional status interpreted as worker, retired, annuitant and unemployed. The status showed no correlation with the ages of the women. It is surprising, however, that barely more than a half of the women (50.67%) who came from the rural environment worked actively. About one third (27.33%) had unemployed staus, and each fifth (20.00%) was an annuitant. Only three of the women (2.00%) were retired.

Table 1. Age of the investigated women and type of physical exercise undertaken

Age	Type of physical activity					Total
	Walking	Running	Swimming	Cycling	None	
	%	%	%	%	%	%
41-45	20.00	15.00	10.00	40.00	15.00	100.00
46-50	22.58	9.68	19.35	22.58	25.81	100.00
51-55	22.22	8.89	0.00	37.78	31.11	100.00
56-60	24.07	0.00	0.00	42.59	33.33	100.00
Total	22.67	6.67	5.33	36.67	28.65	100.00
$Ch^2 = 28.2424$; $p<0.01$; $C = 0.40$						

Due to the fact that a healthy lifestyle has a favourable effect on general well-being and health in its widest meaning, the women were asked about any physical exercise they undertook. The answers they gave concentrated on the most popular forms of physical activity, such as: walking, running, cycling, and swimming (Tab. 1). Bicycle riding was the most preferred form by the rural women; more than one-third of them (36.67%) stated practicing it. Every fifth woman (22.67%) found walking to be her favorite form of physical exercise. Adversely, more than a quarter of the women (28.65%) took no exercise, or wa interested in any form of physical activity. Yet, a statistically significant correlation was found between age and the preferred form of physical activity ($p<0.01$).

Emotional and medical aspect of activity of rural women in the perimenopausal period. One fifth (20.0%) of the women visited a gynecologist sporadically, while another fifth (20.0%), not more often than once every four years, and every fifth woman (19.33%) had herself examined once a year (Tab. 2). Statistically, women living in settlements had gynecological checks made more often than those living in the country ($p<0.01$).

Table 2. Gynecological examination and place of residence

Place of residence	Frequency of gynecological clinic visits					Total
	every year	every two ears	every three years	every four years	Sporadically	
	%	%	%	%	%	%
settlement	16.67	20.00	30.00	25.00	8.33	100.00
country	21.11	23.33	11.11	16.67	27.78	100.00
Total	19.33	22.00	18.67	20.00	20.00	100.00
$Ch^2 = 15,4861$; $p < 0.01$; $C = 0.31$						

Only every sixth woman (16.67%) used hormonal therapy, while every fourth woman (24.67%) had never heard of such a form of therapy (Tab. 3). More than a half of the women (58.67%) knew what hormonal therapy is, but saw no need to use it. Women living in settlements more frequently favoure hormonal therapy than those living in the country ($p<0.01$).

Table 3. Place of residence and using hormonal therapy.

Place of residence	Using hormonal substitutive therapy			Total
	Yes, they do	No, they don't	Never heard of it	
	%	%	%	%
settlement	28.33	55.00	16.67	100.00
Country	8.89	61.11	30.00	100.00
Total	16.67	58.67	24.67	100.00
$Ch^2 = 10,9904$; $p < 0.01$; $C = 0.26$				

Interpretation of perimenopausal experimental symptoms in the investigated group. The questionnaire Menopause Symptom Scale allowed for the assessment of menopausal symptom occurrence and their reception by the investigated women. Discomfort degree these signs provide for were divided into 5 categories (none, slight, moderate, serious, very serious) to be further compared to those of professionally active and nonworking women. In the two groups, women most often complained of heat strokes, feeling nervous, mood fluctuations, vaginal dryness, urination problems, and arthralgia. However, they differed in the degree of discomfort they felt due to those symptoms (Tab. 4).

In the two groups of women, significant differences were noted in the assessment of discomfort they felt due to heat stroke ($p = 0.01$), palpitation ($p = 0.03$), feeling of anxiety ($p<0.0000$), depressive mood ($p = 0.02$), vaginal dryness ($p = 0.01$), and problems in sexual life ($p = 0.03$) Conversely, no significant differences were observed in such fields as: sleeping problems, irritability, physical and mental exhaustion, problems of urination, articular and muscular discomfort ($p>0.05$).

DISCUSSION

Menopausal age is dependent on many factors pertaining to women coming from both rural and urban environment. Studies completed so far confirm that the time of occurrence of menarche, length of menstruation cycle, number of born children and use of oral contraceptives are linked to the menopausal age. Women whose menstruation cycles lasted more than 28 days reached their menopause in an elder age, compared to those whose cycles were shorter than 28 days [2, 3, 8, 9]. It follows from my personal research that menopause age median is 50.59 lat, while the mean value of menarche was 12, 21 years [12, 13].

There was observed a strong tendency towards the menopause occurring in later age in women having a numerous offspring [7, 14]. Statistically considered, women from country surroundings bear a larger number of children than their counterparts from urban ones, and this is one of rare factors impeding the aging process of organism in this group of women. Meanwhile those who had suffered in their childhood from a juvenile stress caused by malnutrition, excessive work and diseases also showed a strong link between menarche and menopause, which seems a significant factor in overall population of rural women [1, 5, 14].

Use of hormonal contraceptives, hormonal therapy in the perimenopausal period impedes menopause in average 0.7 year. As it follows from the study, a law percentage of women living in the country use hormonal therapy [2, 5, 7]. In the investigated female patients living in a country or settlement, merely every seventh patient (16.67%) confesses using hormonal therapy.

Despite numerous studies, little is known on factors dealing with interpopulation differences in menopause age. Many researchers point out a low eco-systemic effect of menopausal period on the role of environmental factors. Nevertheless the impact of menopausal age on the evolution of woman's menstrual cycle and procreation is stressed here [6, 7, 8, 9].

The first menopausal symptoms usually appear in women at about 40-50 years. They may come some years before the last menstruation and continue for a dozen or so after it. They are chiefly induced by a systematic fall in ovarian hormonal levels. Early menopausal symptoms are revealed in heat strokes or hot flushes, night sweats – often, drenching – palpitation attacks, vertigoes, sleep disorders, rise in body temperature. About 85% of women complain of heat strokes both during the day and at night. These last mostly appear twice, or three times a day, felt as a sudden feeling of heat, mostly concentrated in the area of head, and neck. Night sweats may have a light and intensified form (necessitating several cloth changes at night). All these symptoms are due to a deregulated body-temperature control system.

Meanwhile sleep disorders involve both problems of falling asleep, rising at night, and those of falling asleep again [5, 12, 15, 16]. Heat strokes also occurred in the investigated women, declaring different degree of the afore-mentioned troubles – from "light" to"very strenuous" ones. The heat stroke-induced feeling of discomfort was notably determined by the professional status of the inquired patients (p = 0.01) (Tab. 4).

Low economic standing, as well as bad living conditions that make heavy physical work, inappropriate diet, insufficient access to a complex medical care, generate many psychosomatic disorders in a majority of rural women in the menopausal period [17, 18, 19]. Women are particularly exposed to: static reproductive organ disorders, urinary incontinence, osteoporosis, cardiovascular diseases, obesity, depression, and sexual disorders [18, 20, 21]. Appropriate diet, physical activity, avoiding alcohol use and smoking cigarettes, as well as maintaining the appropriate body mass, contribute to reduction of occurrence the above-mentioned diseases. Screening tests, particularly recommended at that time of life, are an important element in preventing these ailments [4, 22]. Still, it seems alarming that every fifth inquired patient (19.33%) had made her preventive checks of the reproductive organ only once a year, and the comparable respective group (20.00%) – more rarely than once four years.

Lipid disorders, hypertension, tobacco smoking, obesity, lack of physical exercise – these are risk factors for arteriosclerosis [1, 14, 18]. All health and beauty guidebooks and periodicals appeal to women to care for appropriate bone calcification; this is just what susceptibility to bone fracture, and osteoporosis occurrence or preventing from this disease depend on. Women in their menopausal age are particularly exposed to functional thyroid disorders; these gland ailments occur 5-8 times more often than in men,

Table 4. Experiencing perimenopausal symptoms and professional status

Domains	Nonworking (unemployed, retired, annuitants)			Working			Statistic Analysis	
	M	Me	SD	M	Me	SD	Z	P
Heat stroke, sweating (sweating episodes)	4.00	4.00	0.81	4.52	5.00	0.92	-2.50	0.01
Heart troubles (attention paid to irregular heartbeats, quick heartbeats, chest pression)	3.62	4.00	1.11	4.15	4.00	1.06	-2.15	0.03
Sleep problems (difficulties in falling asleep, sleeping through all night, early rising)	3.84	4.00	1.20	4.08	4.00	1.04	-1.15	0.25
Depressive mood (feeling of depression, sadness, being about to cry, lack of motivation to act, swinging mood)	2.54	3.00	2.52	3.94	4.00	1.87	-2.32	0.02
Irritability (feeling nervous, inner restlessness, feeling of aggression)	4.24	4.00	0.94	4.57	5.00	0.18	-1.80	0.07
Anxiety (inner nervosity, feeling of panic)	1.51	0.00	2.09	4.58	5.00	1.24	6.40	0.000
Physical and mental exhaustion (generally – reduced possibilities, worsened memory reduced concentration capability, forgetting)	3.73	4.00	0.84	4.06	4.00	0.87	-1.74	0.08
Sexual problems (change in sexual desire, sexual activity and satisfaction)	3.68	4.00	0.99	4.12	4.00	0.93	-2.11	0.03
Bladder problems (urination troubles, polyuria, urinary incontinence)	3.55	3.50	1.18	3.98	4.00	1.18	-1.96	0.05
Vaginal dryness (feeling of vaginal dryness or burning, troubles during sexual intercourse)	4.03	4.00	1.05	4.58	5.00	0.78	-2.56	0.01
Articular and muscular discomfort (arthralgia, rheumatic ailments)	3.79	4.00	1.07	4.08	4.00	0.87	-1.53	0.13

and in the menopausal period their risk gets more and more increased [2, 6, 23]. This is determined by a decreased estrogen concentration in woman's organism [24]. In his respect, one of preventive methods is to follow an appropriate diet in order to provide natural phytoestrogens, non-saturated fat acids [11]. The overwhelming majority (86.7%) of the inquired women did not know natural phytoestrogens sources or use hormonal therapy (58.67%).

Woman's attitude towards her own feminity changes in the climacterium. For lots of them the menopausal period falls in the time of the highest professional activity. Care for a healthy lifestyle and having the preventive checks effected are the very basis of health. More over, the way of nourishing is vital in the menopausal period. Inappropriate diet, and thus – obesity entails an increased risk of arterial hypertension, cancerous disease, and osteoporosis [25, 26]. In the investigated group, overweight women are the most numerous – 54.0%, while only the fifth patient (20.7%) showed normal BMI (20-25). This last index appears worse having considered that almost one third of the inquired patients (28.65%) practices or goes in for no form of physical exercise.

In the menopausal period, environmental factors produce an essential effect on women's lifestyle and occurrence of many chronic diseases [7, 9, 14]. It follows from my own research that only a half of country residents is professionally busy (50.56%); this variable is independent of age. The others have got a status of unemployed or annuitant. This factor entails significant differences in reception of unfavorable symptoms due to menopause [4, 7]. In women professionally non-active psychosomatic syndromes, such as anxiety, depression, enhance a greater discomfort, which makes them limit their contacts with acquaintances or friends. Sleep disorders – particularly, insomnia – as well as sleep continuity disorders, sexual disorders influence women's everyday functional life and their lifestyle [4, 16, 27]. In this respect, the investigated women also reported problems of different intensity (Tab. 4).

The majority of country women has a more difficult access to health preventive programs, and comes to the physician in an advanced stage of disease [6, 7, 22]. This should make health care personnel take necessary measures of health promotion in rural women at the peripausal period.

CONCLUSIONS

Professional status or rural women exerts a significant impact on their general feeling in the menopausal period.

The majority of rural women do not provide an appropriate care for their heath and general feeling in the perimenopausal period.

A depressed (depressive mood), irritability, nervosity, frequent feeling of anxiety, palpitations, heat strokes and sexual disorders are important problems of the menopausal period in women.

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