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Analysis of quality of life of women in menopause period in Poland, Greece, Belarus and Belgium using MRS Scale. A multicenter study

Krajewska - Ferishah K[1], Krajewska-Kułak E[1*], Terlikowski S[2], Wiktor H[3], Van Damme-Ostapowicz K[1], Chadzopulu A[4], Adraniotis J[5], Shpakou A[6]

1 Department of Integrated Medical Care, Medical University of Białystok, Białystok, Poland
2 Department of Obstetrics, Gynecology and Nursing, Medical University of Białystok, Białystok, Poland
3 Department of Obstetrics, Gynecology and Nursing, Medical University of Lublin, Lublin, Poland
4 Kavala Hospital, Kavala, Greece
5 Department of Obstetrics and Gynecology, Kavala Hospital, Kavala, Greece
6 Yanka Kupala State University of Grodno, Grodno, Belarus

* CORRESPONDING AUTHOR:
Department of Integrated Medical Care,
Medical University of Białystok,
7a Marii Skłodowskiej-Curie Str.,
15-096 Białystok, Poland,
Tel: + 48 85 748 55 28; Fax: + 48 85 748 55 28
e-mail: elzbieta.krajewska@wp.pl (Elżbieta Krajewska-Kułak)

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ABSTRACT

Purpose: The aim of this study was to compare the climacteric symptoms, the activity and quality of life of women in the menopausal period from Poland, Greece, Belarus and Belgium using a Menopause Rating Scale (MRS).

Material and methods: The study was conducted among women over 40 years of age, from Poland (241), Belorussia (119), Greece (100), and Belgium (79). For the purpose of this research, the Polish, Russian, Belgian and Greek versions of the MRS were used. The MRS Scoring scheme is simple, i.e. the score increases point by point with the increasing severity of subjectively perceived symptoms for each of the 11 items (severity 0--no complaints, 4 scoring points--severe). The respondent provides her perception by checking one of 5 possible boxes of „severity" for each of the items.

Results: Mild or no complaints were reported to a similar extent by all women from these four countries. The intensity of the psychological symptoms was similar for the studied countries and did not differ significantly ($P = 0.1531$). Similar results we found in the somatic symptoms among the studied groups ($P = 0.1421$). A significant difference in the urogenital and sexual symptoms between Belgian and Belorussian women ($P<0.001$) was found. The frequency of menopausal symptoms was found to be significantly ($P = 0.0381$) higher among Belgian women in comparison to Belorussian ones.

Conclusions: We found some differences between the menopausal complaints reported by women from Belgium, Belarus, Greece and Poland. Belgian women exhibited a more impaired quality of life due to a higher rate and severity of urogenital and sexual symptoms.

Key words: menopause, women, Belgium, Belarus, Greece, Poland

INTRODUCTION

The individual experience of menopause is the result of a complex interplay of biological, psychosexual and socio-relational factors which influence a woman's ability to cope with this life period characterized by significant changes. The changes and symptoms can start several years earlier and include: a change in periods – shorter or longer, lighter or heavier, with more or less time in between; hot flashes and/or night sweats; trouble sleeping; vaginal dryness, mood swings, trouble focusing and less hair on head, more on face [1]. Women, as well as men, experience an age-related decline in physical and mental capacity. They observe symptoms such as periodic sweating or hot flushes, depression, insomnia, impaired memory, lack of concentration, nervousness, and bone and joint complaints [2,3]. Menopause has an impact on the women's quality of life. The Menopause Rating Scale (MRS) is a health-related quality of life scale (HRQoL) and

was developed in the early 1990s in response to the lack of standardized scales to measure the severity of aging-symptoms and their impact on the HRQoL. It can be easily completed by women. The original MRS has been used since 1992. It documents the climacteric symptoms and their changes during treatment [4,5]. Based on this investigation, we used the revised and final version of the MRS.

Belgium has a system of compulsory health insurance, covering the entire population and with a very broad benefits' package (with some restrictions for the self-employed) [6]. Nowadays, health care sector in Greece is characterized as a mixed system of health care provision financed through salary based the National Health System providers, prepaid administered payments based on the social and private insurance funds and fee for-service private practitioners [7]. Belarus inherited from the Soviet era an easily accessible and extensive public health system. Similarly in Poland the public health system is extensive without financial barriers to access.

There are known cultural differences in health beliefs among countries [8]. Eastern Europe (Belarus, Poland) as a cultural entity: the region lying between Central Europe and Western Asia, with main characteristics consisting in Byzantine, Orthodox and limited Ottoman influences. Greece is located at a meeting point of the eastern countries of the world and the western countries and this affects. Belgian culture is an integral part of European culture or Western culture.

The objective of this study was to compare the climacteric symptoms and the quality of life of women in the menopausal period from Poland, Greece, Belarus and Belgium using the MRS scale.

MATERIALS AND METHODS

The study was conducted among women over 40 years of age from Poland (241), Belarus (119), Greece (100), and Belgium (79). The participants included perimenopausal and postmenopausal women from 40 to 61 years old. Women were randomly selected from outpatient the gynecology clinics. Overall, 15% of women refused to answer the questionnaire. The ages of the evaluated women are summarized in *Tab. 1*. The Menopause Rating Scale (MRS) was obtained from Professor Heinemann from the Center of Epidemiology and Health Studies in Berlin. For the purpose of this research, the Polish, Russian and Belgian versions of the MRS were used [9]. The Greek version had been validated in Greece by Chadzopulu *et al*.

The MRS Scale measures changes over time and across different cultures (the MRS scale is available in 25 languages). It can also be used to evaluate changes before/after treatment with hormone replacement therapy. The respondents have a choice among 5 categories: no symptom, mild, moderate, marked, and severe. The total score of the MRS ranges between 0 (asymptomatic) and 44 (the highest degree of complaints). The minimal/maximal scores vary between the three dimensions depending on the number of complaints allocated to the respective dimension of symptoms:

- psychological symptoms: 0 to 16 scoring points (4 symptoms: depressed, irritable, anxious, exhausted)
- somato-vegetative symptoms: 0 to 16 points (4 symptoms: sweating/flush, cardiac complaints, sleeping disorders, joint and muscle complaints)
- urogenital symptoms: 0 to 12 points (3 symptoms: sexual problems, urinary complaints, vaginal dryness).

Concerning the menopausal status, the following definitions were used: premenopausal (women having regular menses); perimenopausal (irregularities >7 days from their normal cycle) and postmenopausal (no more menses in the last 12 months) [10]. Data included in this study were age, place of residence, educational level, smoking habits and the use of hormone therapy.

Statistical analyses were performed with the commercial software Statistica 7.1. PL for Windows (StatSoft, Tulsa, OK, USA). Data are expressed as mean ± standard deviation (S.D.) and percentages. ANOVA and chi-square calculation were used to compare continuous and categorical data. A *P*-value of <0.05 was considered statistically significant. The study was approved by the Ethical Committee at the Medical University of Bialystok, Poland.

Table 1. **Age of women with menopause (N=539).**

Country	$\bar{x}$	N	SD	Min	Max
Poland	50.7	241	4.26	40	60
Belgium	51.9	79	4.80	42	61
Belorus-sia	51.8	119	3.71	45	61
Greece	51.9	100	3.61	45	60
Total	51.3	539	4.14	40	61

$\bar{x}$ - mean, SD – standard deviation

RESULTS

As shown in *Tab. 1*, the mean age of the whole sample (N=539) was 51.3 ± 4.1 years. We found significant differences in age between women in the studied countries ($P = 0.0203$). Women from Poland were younger in comparison to women from Belgium, Belarus and Greece.

In Poland almost 20% of the women lived in villages, similarly in Belgium (28%), Greece (12%), but in Belorussia only 7.6% women were from villages. Most women from Belorussia and Greece lived in big cities. Results are not presented.

Almost 40% of women from Belgium had an academic education, but only 8% of Greek women had the same education level. These differences were statistically significant

Table 2. **Financial status of women with menopause (N=539).**

Country	Financial status				Total
	Very good	Good	Satisfactory	Unsatisfactory	
Poland	9 [a b]	83	135	14	241
%	3.7%	34.4%	56.0%	5.8%	100%
Belgium	13	49	17	0	79
%	16.5%	62.0%	21,5%	0,0%	100%
Belorussia	0	14	87	18	119
%	0.0%	11.8%	73.1%	15.1%	100%
Greece	12	46	40	2	100
%	12.0%	46.0%	40.0%	2.0%	100%
Total	34	192	279	34	539

Very good financial status [a]$P = 0.0003$ vs. Belgium; [b]$P=0.015$ vs. Greece; chi-square test.

Table 3. **Smoking among women with menopause (N=539).**

Country	Smoking			Total
	Currently	Never	Stopped	
Poland	54	131	53	238
%	22.7%	55.0%	22.3%	100%
Belgium	23	48	8	79
%	29.1%	60.8%	10.1%	100%
Belorussia	11	104	2	117
%	9.4%	88.9%	1.7%	100%
Greece	40 a b	51	9	100
%	40.0%	51.0%	9.0%	100%
Total	128	334	72	534

Greek women were current smokers in a higher rate than Belorussian women (40% vs. 9.4%, [a] $P < 0.001$), and Polish women (40% vs. 22.7%, [b] $P=0.024$). Chi-square test.

($P < 0.001$). A similar proportion of academic education was noted among Polish (20%) and Belarusian (18%) women. Nearly 42% of Greek women only completed primary school, 8% of Belgian and 6% of Polish women. Data are not shown.

Belgian and Greek women assessed their financial status better than Polish women. Approximately 90% of women from Belarus declared their financial status as satisfactory. None of these women assessed their financial status as very good (*Tab. 2*).

Greek women were current smokers at a higher rate than Belorussian women (40% vs. 9.4%, $P < 0.001$), and Polish women ($P = 0.024$). The highest proportion of women who never smoked was noted among Belorussian women (88.9%). Details are presented in *Tab. 3*.

The frequency of hormonal replacement therapy was similar in the particular countries (15-19%) and did not differ significantly ($P = 0.8399$) (*Tab. 4*). Belgian women more often used hormonal replacement therapy than women from the other countries. No correlation was found between age and using hormonal replacement therapy. Similarly, no correlation was found between education levels and use of hormonal replacement therapy. Data are not shown.

Table 4. **Hormonal therapy among women with menopause (N=539).**

Country	Do you use hormonal therapy ?		Total
	yes	no	
Poland	38	203	241
%	15.8%	84.2%	100%
Belgium	15	64	79
%	19.0%	81.0%	100%
Belorussia	17	102	119
%	14.3%	85.7%	100%
Greece	15	84	100
%	15.2%	84.8%	100%
Total	85	453	538

The distribution of the psychological symptoms in the MRS has been depicted in *Tab.5*. The intensity of the psychological symptoms was similar in the studied countries and did not differ significantly ($P = 0.1531$). Similar results we found in the somatic symptoms among the studied groups ($P = 0.1421$). A significant difference ($P<0.001$) was found in the urogenital and sexual symptoms between Belgian and Belorussian women. The frequency of menopausal symptoms was found to be significantly ($P = 0.0381$) higher among Belgian women in comparison to the Belorussian ones.

DISCUSSION

In the present study, we did not generally find significant differences in the reported complaints on the MRS scale. We also noted that more Belgian women reported marked complaints on the MRS scale compared with complaints of respondents from Belarus, Greece and Poland. We only found a significant difference in the urogenital and sexual problems between Belgian and Belorussian women. To our knowledge, this is the second study comparing the MRS complaints among women from these countries. In the previous report [11] we

Table 5. **The Menopause Rating Scale (MRS) scores per subscale according to country.**

Country	Psychological symptoms	Somatic	Urogenital and sexual symptoms	Total
Poland	4.8 ± 3.4	4.9 ± 3.0	2,5 ± 2.4	12.2 ± 7.6
Belgium	5.0 ± 2.9	5.5 ± 2.7	3,3 ± 2.4 a	13.8 ± 6.5 b
Belorussia	4.1 ± 3.5	5.2 ± 3.7	1,6 ± 2.4	10.8 ± 8.0
Greece	4.7 ± 3.0	5.7 ± 3.1	2,6 ± 2.2	12.9 ± 6.5
Total	4.6 ± 1.15	5.2 ± 1.05	2.5 ± 2.5	

Values expressed as means ± SD. [a] P <0.001 vs. Belorussia in urogenital and sexual symptoms ; [b] P = 0.0381 vs. Belorussia in total MRS scores. ANOVA – test.

assessed the quality of life for women with menopause from Poland, Greece and Belarus. Total MRS scoring obtained from Greek women were higher than those from Belorussian ones. In the present study, women were relatively asymptomatic. Our findings are in agreement with previous reports [12-15].

The prevalence of hot flashes among women who had not begun the menopausal transition ranges from 6% to 13%. As women progress from the early to late menopausal transition stages, the prevalence of hot flashes increased (late reproductive, 4% to 46%; late menopausal transition, 33% to 63%) [12]. For women in the early or late menopausal transition stages, prevalence of depressed mood symptoms estimates ranged from 28% to 29%; for those who had completed menopause, the symptoms ranged from 24.5% to 34% [13,14]. Symptoms of vaginal dryness were reported as bothersome by 3% of women in the reproductive stage, 4% of women in the early menopausal transition, 21% of women in the late menopausal transition, and 47% of women who are 3 years postmenopausal [12]. The prevalence of urinary symptoms was reported as 17% in women in the late reproductive stage, 12% in women in the early menopausal transition, 14% in women in the late menopausal transition, and 14% in women who were postmenopausal [12]. Estimates of sleep disturbances range from 31% for women in the reproductive stage to 45% for women who are three years postmenopausal [15].

In the present study, we found that Belgian and Greek women assessed their financial status better than Polish women. None of these women assessed their financial status as very good. It known that menopausal symptoms are related to financial status [16,17]. In community-based survey of factors related to menopausal and other symptoms in a multi-racial/ ethnic sample of 16,065 women aged 40-55 years Gold *et al*. [15] found that all menopausal symptoms were increased in women who reported difficulty paying for basics.

The MRS scale is a valuable modern tool for the assessment of menopausal com-plaints. It combines, in practice, excellent applicability and good reliability, and there are normal values available for the population. The MRS serves as an adequate diagnostic instrument for menopausal quality of life [4,9,17-21].

Schneider *et al*. [19] evaluated the MRS for scoring menopausal symptoms by comparison with other instruments relevant for women in their menopausal transition: the Kupperman index and the quality-of-life scale SF-36. In a population sample of 306 German women (aged 40-60), they found a strikingly good association between the subscales of the SF-36 and the MRS.

Recently, Heinemann *et al*. [4] performed a large, multinational survey to represent the situation across nine countries and cultures between November 2001 and February 2002 to get information about the knowledge, attitudes and behavior related to hormonal treatment in women aged 40–70 years: *Europe* (Germany, France, Spain, Sweden), *North America* (USA), *Latin America* (Mexico, Argentine, Brazil), and *Asia* (Indonesia). The sample size in each of the countries was about 1000 females aged 40–70 years, with the exception of the USA (n = 1500). They found the MRS scale highly qualified to measure and compare the HRQoL of aging women in different regions and over time; and the study suggested a high reliability and high validity of the MRS scale.

The MRS scale was also used in the assessment of the health-related effects of hormone treatment. Heinemann *et al*. [20] analyzed in an open, uncontrolled post-marketing study with over 9000 women with pre- and post-treatment data of the MRS scale to critically evaluate the capacity of the scale to measure the health-related effects of hormone treatment. The improvement of complaints during treatment relative to the baseline score was 36% on average. Patients with little/no complaints before therapy improved by 11%, those with mild complaints at entry by 32%, with moderate by 44%, and with severe symptoms by 55% - compared with the baseline score. They concluded that the MRS scale showed some evidence for its ability to measure treatment effects on the quality of life across the full range of severity of complaints in aging women.

In a recent study, Im *et al*. [21] explored the commonalities and differences in menopausal symptom experience among four major ethnic groups in the United States (160 Whites, 120 Hispanics, 121 African Americans, and 111 Asians). The women perceived and accepted the changes brought by the menopausal transition and felt that they became more mature than ever before. They tried to be positive about their lives, menopause, and the menopausal symptoms. There were slight ethnic differences in the sources of social support and satisfaction with this support. The White women tended to be open about their menopausal symptoms and freely discussed

them, whereas ethnic minorities mentioned staying silent about menopausal symptoms and the support that they were getting. Furthermore, all the women wished for better treatment by their physicians regarding their menopausal symptoms.

CONCLUSIONS

We found some differences between the menopausal complaints reported by women from Belgium, Belarus, Greece and Poland. Belgian women exhibited a more impaired quality of life due to a higher rate and severity of urogenital and sexual symptoms.

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