

Knowledge and use of hormone replacement therapy among Polish women: estimates from a nationally representative study—HORTPOL 2002

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Abstract

Objectives: To evaluate the knowledge about hormone replacement therapy (HRT) and the prevalence of its current use in Polish female population. **Methods:** Cross-sectional survey on a representative sample of 1544 women between 18 and 87 years of age. **Results:** Almost half of the Polish women have heard of HRT. Depending on the education level, 26–38% of women knew that HRT alleviates the physical and psychological symptoms of menopause and 18–32% knew that HRT reduces the risk of developing osteoporosis. Forty-three percent of all the women with a higher level of education were aware that HRT increases the risk of breast and uterine cancer. The prevalence of current HRT use among women aged 45–64 was 12%. Women who had only basic education were less likely to use HRT than those with a medium and higher education level. Lack of information about HRT was the main cause of not using it. Forty-four percent of the perimenopausal women (age range 45–54 years) have never heard of HRT and 36% were never told by their healthcare providers that they could use it. Nineteen percent of perimenopausal women were not using HRT because they were afraid of the HRT related risks. Sixty-four percent of women who were using HRT were prescribed oral HRT preparations. **Conclusions:** A fairly small proportion of Polish women currently uses HRT, largely because most remain poorly informed about the therapy.

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1. Introduction

Although hormone replacement therapy (HRT) is a subject of great interest in the field of woman's

health, the prevalence of its current use among Polish women is unknown. HRT is widely accepted as an effective treatment for symptoms associated with the menopause but uncertainty exists about its long-term use to prevent disease and prolong life [1–4]. One arm of the Women's Health Initiative (WHI) trial was terminated early due to increased breast cancer risk and thrombotic events which were observed among

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women on a combined estrogen–progestin regimen [5]. Despite this uncertainty surrounding the overall impact of HRT on women's health, US and Canadian data indicate that the prevalence of hormone use has been steadily increasing since the 1980s [6,7]. Poland is also a country where a substantial increase of prescribing hormones to postmenopausal women has been observed however, the exact prevalence of HRT use by Polish women is still unknown. Thus, the aim of our study was to determine the knowledge about HRT and prevalence of its current use among women in Poland.

2. Methods

2.1. Study sample

An acronym Hormone Replacement Therapy in Poland (HORTPOL) was given to this study which was performed at the beginning of the year 2002 as a part of a NATPOL III Plus programme (prevalence of arterial hypertension in Poland) on a nationally representative sample of 1544 Polish women (age range 18–87 years). The survey was conducted by using a three stage sampling design which yielded a nationally representative sample of 1544 women over the age of 18 years.

For the first stage, an equal probability sample of cities, towns, and rural areas was selected. The selection of the primary sampling units was independent within each stratum and proportionate to the population size of each element. Furthermore, the number of completed interviews within each stratum was set to mirror the proportion which each stratum takes in the population. To determine the required number of interviews within each of the 60 strata we utilized the data from the Polish Main Statistical Office, which specifies the distribution of men and women over the age of 18 years for each geographical stratum. The number of interviews within each demographic stratum was set to be proportional to the population size. To obtain a self-weighting sample, with each respondent having at least approximately equal probability of selection, we applied the systematic sampling algorithm introduced by Hartley and Rao [8] which allows to sample primary sampling units with probability proportional to the given primary sampling

units' population size. For the second stage, selection of villages in the rural areas or streets in the urban centers was performed by the Polish Ministry of Internal Affairs, from the primary sampling units which were selected in the first stage of our sampling procedure. These primary selections were obtained through simple random sampling without replacement. In the third stage, selection of respondents within each primary selection was also performed by the Polish Ministry of Internal Affairs which has access to the Central Data Bank that is updated every 2 weeks and contains information about gender, age, and address of every individual in the country. The sampling frame at this stage of the sampling procedure consisted of women within each age category (18–24, 25–34, 35–44, 45–54, 55–64, 65 years and over). Two additional individuals were sampled for each respondent living in the urban strata with the population size over 200 thousand, and one additional individual for each respondent living in the remaining strata. They were only contacted when we were unable to complete a set of interviews within each primary selection.

2.2. Data collection

All respondents ($n = 1544$) were asked questions about their education level and knowledge about HRT related risks and benefits. According to the education level, women were divided into three groups: women with a higher education level (more than 12 years), women with a medium education level (from 9 to 12 years) and women with a basic education level (less than 9 years). Women who were over 45-years-old ($n = 764$) were additionally asked about their current HRT use or the reasons of not using it. The interviews were carried out by local nurses at respondents' homes. The collection of data was completed at the end of April 2002.

2.3. Statistical analyses

Statistical analyses were performed using Statistica 6.0 for Windows software. Qualitative data were analyzed by χ^2 testing. A P value less than 0.05 was considered statistically significant. All values are expressed as percentages for qualitative data. Standard error by 95% confidence interval for a sample of 1544 adult female respondents and a 15.18 million female

population over the age of 18 years in Poland was $\pm 2.79\%$. Standard error by 95% confidence interval for a sample of 764 female respondents over the age of 45 years and a 7.5 million female population over the age of 45 years in Poland was $\pm 3.96\%$.

3. Results

3.1. Awareness of HRT among women in Poland

When we questioned all of our female respondents (aged 18–87 years), if they had ever heard of HRT, almost half of them (49%) answered affirmatively. Women in the perimenopausal age (45–54 years) were more likely to hear about HRT than women from the other age groups (Fig. 1). Also, women with a higher level of education were more likely to hear about HRT than those with the basic education (84 vs. 31%, $P < 0.05$).

3.2. Knowledge concerning the benefits and risks of HRT use

All of our female respondents (aged 18–87 years) who had heard about HRT were additionally questioned about the benefits and risks of its use. Depending on their education level, 26–39% of women knew that HRT alleviates the physical and psychological symptoms of menopause and 30–45% believed that HRT prevents the effects of aging, 18–32% said that

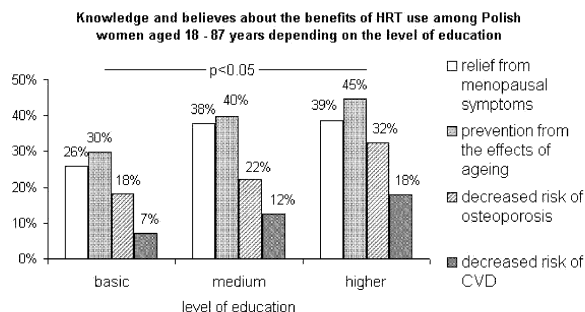


Fig. 2. Women's knowledge and beliefs about the benefits of HRT use depending on the level of education. The differences between women with basic and higher education were all statistically significant ($P < 0.05$). CVD, cardiovascular disease.

HRT reduces the risk of developing osteoporosis, and 7–18% claimed that HRT decreases the risk of coronary heart disease (Fig. 2). The differences between women with basic and higher education levels were all statistically significant ($P < 0.05$).

We also asked all of our female respondents who had heard of HRT about the risks of its use. Depending on the education level 18–43% of women knew that HRT may increase the risk of breast and uterine cancer. 33–37% claimed that HRT use produces weight gain and 6–8% said that HRT increases the risk of hypertension and myocardial infarction. Knowledge about cancer risk was also significantly higher among women with higher education level ($P < 0.05$) (Fig. 3).

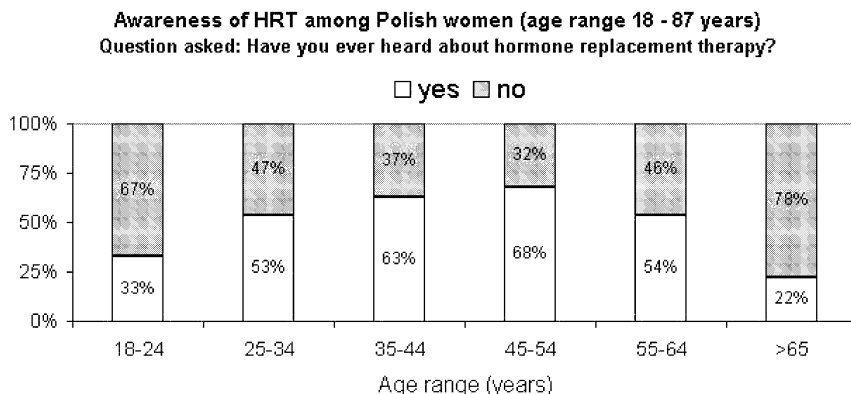


Fig. 1. Awareness of HRT among Polish women according to age. Women in the perimenopausal age (45–54 years) were more likely to hear about HRT than women from the other age groups.

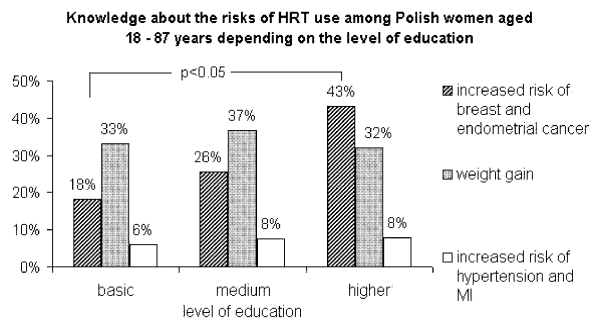


Fig. 3. Women's knowledge and beliefs about the risks of HRT use depending on the level of education. Knowledge about cancer risk was significantly higher among women with a higher education level (>12 years) ($P<0.05$). MI, myocardial infarction.

3.3. Prevalence of HRT use among Polish women

Since estrogen deficiency symptoms often preclude the onset of menopause, the use of HRT is often prescribed to some women before the age of 50 years. Therefore, we evaluated the prevalence of HRT use among all the women who were more than 45-years-old. Our data showed, that the prevalence of current HRT use among women aged 45–64 years was 12%. Women at the perimenopausal age (45–54 years) were more likely to be current HRT users compared with those who were more than 65-years-old (15.7 vs. 1.7%, $P<0.05$) (Fig. 4). Also women between 45 and 64 years of age with medium and higher level of education were more likely to be current HRT users compared with those with the basic education level (28.9 vs. 1.4%, $P<0.05$ and 32 vs. 1.4%, $P<0.05$, respectively).

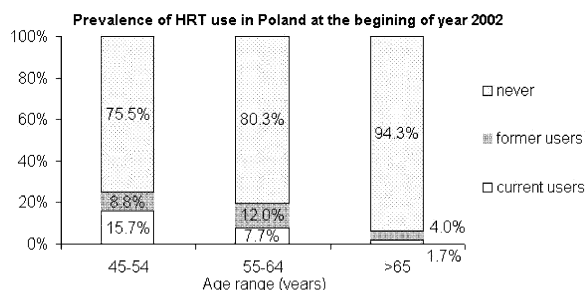


Fig. 4. Prevalence of HRT use among Polish women. The collection of data has been completed in April 2002.

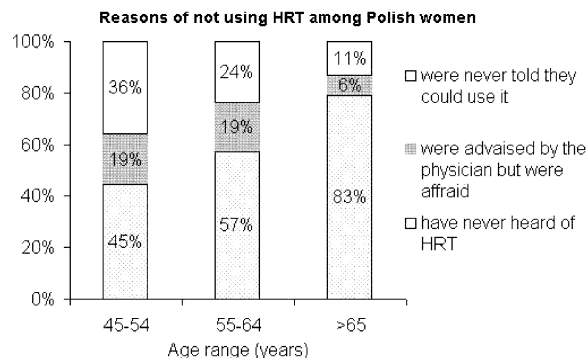


Fig. 5. Reasons of low current HRT use among Polish women over the age of 45 years.

3.4. Causes of the low prevalence of current HRT use among Polish women

A great impact on the low prevalence of current HRT use among Polish women over the age of 45 years had the fact that 45–83% of our respondents (depending on the age group) have never heard of HRT. Another cause was that those women very often were not advised by their healthcare providers to use HRT. Thirty-six percent of the perimenopausal women (45–54 years) who had heard about HRT admitted that they were never told by their physicians that they could use it. Fear of HRT associated risks was the third mentioned cause of not using it. Nineteen percent of women aged 45–64 years said that they did not use HRT because were afraid to (Fig. 5).

3.5. HRT preparations and routes of administration most often used in Poland

We also asked the women who were current HRT users about the HRT preparations they were using. Our data showed that the oral route was the most common route of HRT administration ($P<0.05$). Sixty-four percent of the mentioned HRT preparations used by Polish women were in tablet form. Twenty-five percent of current HRT users were using transdermal patches and 5% were given HRT intramuscularly. A combination of estradiol valerate sequentially combined with levonorgestrel for the last 11 days of each 21 day cycle (Klimonorm, Jenapharm, Germany) was the most often used HRT preparation. Preparations containing

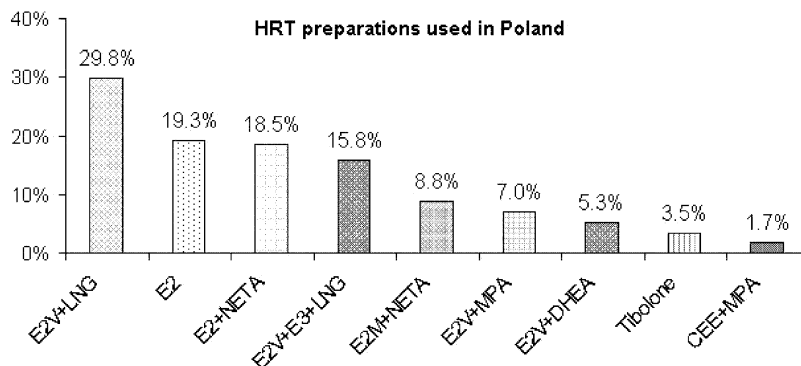


Fig. 6. HRT preparations in Poland—prevalence of use. Legend: E2V, estradiol valerate; E2, 17 β -estradiol; E3, estriol; E2M, micronized estradiol; CEE, conjugated equine estrogens; LNG, levonorgestrel; NETA, norethisterone acetate; MPA, medroxyprogesterone acetate; DHEA, dehydroepiandrosterone.

natural 17 β -estradiol were the second most often prescribed HRT regimens (18.5–19.3%). Preparations containing conjugated equine estrogens (CEE) were prescribed very seldom to Polish women (Fig. 6).

4. Discussion

The results of our study show that 68% of perimenopausal Polish women (age range 45–54 years) have heard of HRT and that their knowledge about the risks and benefits of HRT use depends very much on their level of education. The prevalence of current HRT use among women aged 45–64 years in Poland was 12% and the peak estrogen use (15.7%) occurred consistently among women between the ages of 45 and 54 years, coinciding with the onset of menopausal symptoms for most women. Women who had only basic education were less likely to use HRT than those with a medium and higher education level. Our findings are consistent with results of other studies that have found an association between education and HRT use [6,9–13]. It is probably due to the fact that well-educated women may be more likely to read articles about HRT, have more substantive discussions with physicians about their personal benefits and risks of HRT use and thus seek this treatment.

Our study also shows that HRT use decreases with the increasing age. This may be due to the fact that many women may have begun this therapy to treat menopausal symptoms and discontinued it as symptoms resolved. But only 4% of the women who were

over 65 years were former HRT users which points out that the decline of HRT use with increasing age is also caused by the fact that older women experienced menopause at a time when HRT was less commonly prescribed. Therefore, both, duration and cohort effect may be reflected in the age difference in HRT use.

Comparable estimates for the use of HRT in European women aged 45–64 years showed that Germany and Denmark reported a median level of use (23 and 18.4%, respectively) [13,14] while Scandinavian countries such as Norway and Sweden were on the top (32%) [15,16], and southern Europe was lowest (Spain and Italy less than 10%) [17,18]. The reasons of the low prevalence of HRT use in Poland compared with other northern European countries may be due to cultural differences in the understanding of perimenopause [19–21], different attitudes towards hormonal contraception [22,6], different practice concerning who is prescribing the medication [23–25], practical differences concerning ways of administration [26] and knowledge about the use of HRT—both among women and physicians [23,25,27–30]. The recent WHI findings which showed increased breast cancer risk and thrombotic events among women on a combined estrogen–progestin regimen and which did not support a beneficial effects of HRT on cardiovascular risk are not the cause of the low prevalence of HRT use presented in our study. The results of the WHI trial were published in July 2002 [5], 3 months after we have finished collecting our data, therefore, they undoubtedly have not influenced our results.

Previous studies have shown that less than half of the perimenopausal women in industrialized countries have received information about HRT [23,31] and about half of European women (range across countries, 38–61%) have not discussed menopause or its symptoms with their doctors [32]. In our study, we have shown that 45% of perimenopausal women (age range 45–54 years) have never heard of HRT. Lack of information about HRT was also the first mentioned reason of not using it. The second mentioned cause of not using HRT was that women were never advised to use it by their healthcare providers. This finding points out that HRT counseling by Polish physicians is still inadequate. The percentage of perimenopausal women who were not using HRT because were afraid of HRT risks and side effects was only 19%.

In our survey, we have also asked the women who were current HRT users about the HRT preparations they were using. Oral HRT preparations were most often prescribed to current HRT users (64%). Transdermal and intramuscular preparations were used by 25 and 5% of women, respectively. In Europe, only France is the country where transdermal HRT preparations seem to be used more often than oral HRT preparations [33]. The most often HRT preparation prescribed to Polish women was a combination of estradiol valerate sequentially combined with levonorgestrel (Klimonorm, Jenapharm, Germany). Preparations containing natural 17 β -estradiol (given transdermally or orally in a micronized form) were the second most often prescribed HRT regimens in Poland. Surprisingly, less than 2% of current HRT users in Poland were prescribed preparations containing CEE which were the second most frequently prescribed medication in the United States [34] until the confounded results of the WHI trial [5]. Our survey, however, has been conducted before the results of the WHI study, so this is also not the cause of the low prevalence of prescribing CEE to Polish women. It is probably due to the fact that HRT preparations became widely available in Poland at the end of 1980's when natural 17 β -estradiol, or its esters were already used in most HRT regimens. CEE were not available on a Polish market until the end of 1990's when most Polish physicians already had a good experience with HRT preparations containing 17 β -estradiol.

Our study has several limitations. First, our survey findings were subject to reporting bias because

HRT use and other variables were self-reported. Second, we lacked information on the reasons why these women were using HRT and the duration of use. Finally, we had no data about discussions of HRT between patients or sex of treating physicians. Several studies have shown that gynecologists are more likely than other physicians to prescribe HRT [35–37]. However, to our knowledge this is the first cross-sectional study on a nationally representative sample of women which has estimated the knowledge and prevalence of HRT use among women in Poland.

Summarizing, 12% of Polish women aged 45–64 are current HRT users which is less than half of that compared with other northern European countries. This is mostly caused by the fact that 44% of perimenopausal women (aged 45–54 years) have never heard of such a therapeutic option and that 36% were never told by their healthcare providers that they could use it. Only 19% of perimenopausal women do not use HRT because they are afraid of HRT related risks. The most often used route of HRT administration in Poland is the oral route (64%). Transdermal route of HRT administration is only used by 25% of women. The most often HRT preparation prescribed to Polish postmenopausal women is a combination of estradiol valerate sequentially combined with levonorgestrel (Klimonorm, Jenapharm, Germany). Preparations containing 17 β -estradiol (given transdermally or orally in a micronized form) are the second most often prescribed HRT preparations. Preparations containing CEE are prescribed to Polish women very seldom (less than 2%). In conclusion, HRT in Poland is used by a small proportion of postmenopausal women, largely because most remain poorly informed about the therapy.

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