



ASSESSMENT OF THE BENEFITS OF TAKING HERBAL MEDICINES AND SUPPLEMENTS TO OVERCOME THE SYMPTOMS OF MENOPAUSE

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ABSTRACT

In recent years, there is a trend towards increasing consumption of natural therapeutic agents to manage the symptoms of menopause. Common ingredients in natural preparations include Cranberry extract, Oenotherabiennis oil, Glycine max, Cimicifuga racemose extract, and others. They improve the physical and emotional health of menopausal women and help to overcome hormonal imbalance.

The study is conducted on the territory of Varna Municipality through a direct anonymous inquiry during the period January – March 2018. The study included 50 female respondents (n=50) with menopausal symptoms, between the age of 35 and 65 years.

The study results demonstrated the increase in consumption of natural preparations for managing menopausal symptoms (86% of respondents). The herbal product and/or nutrition supplement that respondents take contain mostly calcium in combination with vitamin D, cranberry extract and evening primrose oil. To a lower extent, female respondents take preparations which contain soy phytoestrogens or silver candle herb.

A big relative share of respondents (76%) reported for significant improvement in their health condition. There is a positive correlation between this indicator and the longer period of natural product intake. Regarding the subjective assessment of respondents about the price of the natural product they use, 74% of women claim that they can afford it. There is no direct relationship between the monthly income of respondents and the way they define the price.

Keywords: herbal medicines, menopause, alternative therapy

INTRODUCTION

Menopause is related to estrogen deficiency which leads to vasomotor, urogenital and psychological symptoms including hot flushes, vaginal dryness, and bone loss. In recent years, there is a trend towards increasing consump-

tion of natural therapeutic agents to manage the symptoms of menopause. They are defined as an alternative therapy and consist mainly of herbal preparations and nutritional supplements containing vitamin complexes and minerals.

The alternative therapy is appropriate for women where:

- there are contra-indications for hormone-replacement therapy;
- there are hormone-dependent tumors;
- there is a long-term intake of hormones;
- do not want to take preparations containing hormones.

Common ingredients in natural preparations include Cranberry extract, Oenotherabiennis oil, Glycine max, Cimicifuga racemose extract, and others. They improve the physical and emotional health of menopausal women and help to overcome hormonal imbalance.

Natural ingredients affecting the menopausal symptoms

Phytoestrogens are plant substances whose effect resembles that of a female sex hormone estrogen. The primary class phytoestrogens are isoflavones which exhibit estrogen-like activity due to their similarity in structure with human estrogens and high-affinity relationship to the estrogen receptor β .

The isoflavones genistein and daidzein in *soybeans* (*Glycine max*) affect menopausal symptoms such as hot flushes, sweating, vaginal dryness [1], and sudden mood swings. Some clinical trials, however, question the degree of benefit of their use to control menopausal symptoms [2].

Red clover (*Trifolium pratense*) is also characterized by its high content isoflavones (genistein, daidzein, biochanin A and formononetin), which have positive effects in osteoporosis prevention, alleviate some of the menopausal symptoms associated with changes in vagina, brain and cardiovascular system. According to Shakeri et al. (2015), the red clover intake reduces the severity of menopausal symptoms without any side effects on the uterus and the breast [3].

Evening primrose oil (Oenotherabiennis) is widely used in the pharmaceutical industry to treat health problems related to the breast, premenstrual and menopausal syndromes [4]. It contributes to the reduction of the intensity of hot waves [5], body mass and improves the skin condition. The oil is a source of unsaturated fatty acids [6] and phytosterols that modulate the release of pro-inflammatory mediators [4][7].

The hormonal changes that are common for the menopause are related to changes in the urogenital system, which is a prerequisite for frequent urinary tract infections.

Cranberry (Vaccinium) is a rich source of bioflavonoids that contribute to normal urinary tract function. Its favorable properties are due to so-called proanthocyanidin (PAC) A in the plant that inhibits the adhesion of *Escherichia coli* and other bacteria to the urinary tract mucosa. The threshold at which the anti-adhesive effect (known as the PAC equivalent) is achieved is 36 mg proanthocyanidins [8].

The Silver candle herb or (Cimicifugaracemosa) is one of the most well researched herbal remedies for the treatment of menopausal syndrome [9]. Root extracts are traditionally used for various female complaints including birth pain, uterine colic, and dysmenorrhea. Silver candle herb contains triterpene glycosides, flavonoids, volatile oils, tannins and other pharmacologically active ingredients [10]. Contrary to some publications, the herb does not contain formalin one, camphor, and genistein and should not be classified as phytoestrogens. The pharmacological effects of the silver candle herb are expressed in the selective modulation of the estrogen receptor (SERM) [11].

Vitamin D and calcium. Elimination of estrogenic function during the menopause leads to vitamin D deficiency which leads to a negative calcium balance. Both factors are prerequisite for loss of bone density and a risk factor for osteoporosis. It is recommended to take vitamin D (or with a combination of calcium) which is involved in the metabolism of calcium and phosphorus and helps their absorption.

Aim

This article aims to evaluate the benefits of taking herbal preparations and supplements to overcome menopausal symptoms.

Materials and methods

The study is conducted on the territory of Varna Municipality through a direct anonymous inquiry during the period January – March 2018. The questionnaire consists of 16 multiple choice questions. The study included 87 female respondents aged 35 – 65. The questionnaires of 50 respondents who meet the criteria are presented and analyzed:

- women whose premenopausal/menopausal exposure is diagnosed by a medical doctor;

- women who have at least 5 symptoms associated with menopausal symptoms.

The SPSS statistical program was used to process the survey data. The following statistical methods are used to analyze the collected data:

Descriptive methods – frequency analysis of quality variables. Calculation of relative frequencies in (%).

- Deductive methods:
- Nonparametric analysis – chi-squared – for categorical variables.
- Correlation analysis – Pearson correlation coefficient (r) for calculating qualitative variables to compare odds between one or more pairs of variables to establish statistical interdependencies between them.
- Kolmogorov-Smirnov criterion (crosstabulation) – to check the compliance for one or two samples.
- Graphical analysis – for graphical presentation of the results, pie charts and column charts with Excel program were constructed.

For the study, the statistically significant result, the level of significance of the null hypothesis was assumed to be $p \leq 0.05$.

Results and discussion

The study included 50 women (n=50) between the age of 35 and 65 years. The respondents aged 40-50 years are with the highest relative share (n=29; 58,0%), n=16 (32,0%) respondents are between 50-60 years, followed by those between 35-40 years (n=4; 8,0%). Respondents over 65 years (n=1; 2,0%) are the least.

The majority of respondents (n=43; 86,0%) take herbal preparations and/or dietary supplements, and n=7 (14,0%) of them did not take such natural therapeutics.

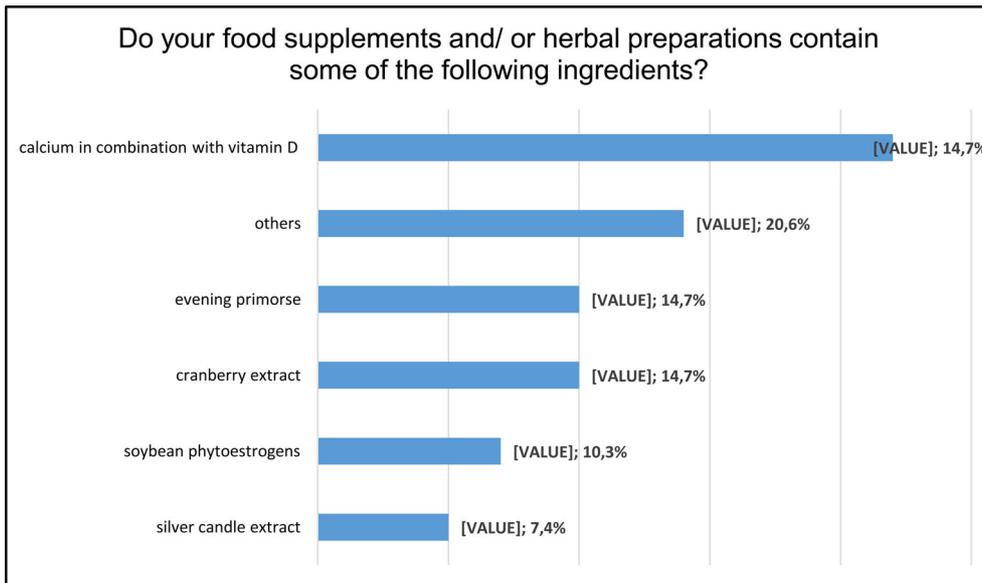
The questionnaires of respondents who use natural treatment in/without combination with medical products are analyzed to determine the composition of the most frequently used food supplements and herbal preparations and whether they have a positive effect on the health of menopausal women.

Of all respondents, most women who receive menopause treatment (n=43; 86,0%), 11 women use only natural treatment and 32 women – both natural treatment and medical preparations.

A significant number (n=46; 94,0%) of respondents claim that early prevention is of major importance for managing menopausal symptoms, three of them (6,0%) consider that early prevention does not matter in this direction.

The food supplements that respondents receive contain primarily calcium in combination with vitamin D (32,4%). On the second place with equal shares are cranberry extract (14,7%) and evening primrose oil (14,7%); third – soybean phytoestrogens (10,3%) and fourth – silver candle extract (7,4%) (Figure 1).

Fig. 1. The composition of food supplements and/or herbal preparations for managing menopausal symptoms.



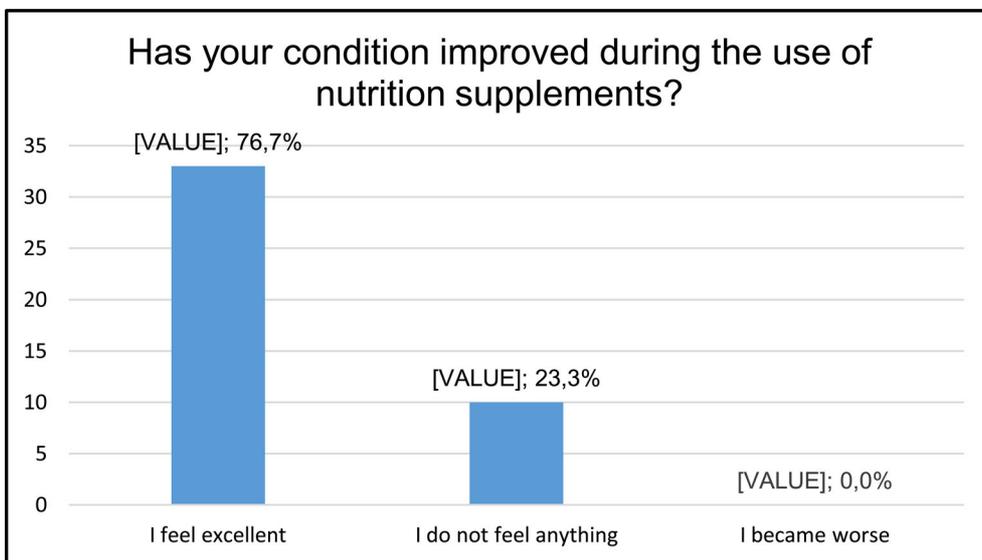
Correlation analysis is applied to determine which component is critical in improving the health status of the menopausal women who participated in the study. According to data analysis, the application of “evening primrose oil” was the most effective at $r=0.303$, $p<0.48$. No correlation was reported when testing the other ingredients.

The respondents received information about the alternative product from a pharmacist (n=19; 35,2%), a gynaecologist (n=13; 24,1%), the Internet or a media (n=9;

16,7%), a friend (n=6; 11,1%), other (n=7; 13,0%).

In a big relative share of women (76,7%) an improvement and reduction of menopausal symptoms were observed after nutritional supplement or herbal preparation intake. A part of the women in the study (23,3%) did not report a change in their condition after taking the alternative product. None of the participants responded “I became worse” (Figure 2).

Fig. 2. Efficacy of nutritional supplements and/or herbal preparations to manage the menopausal symptoms.



Most respondents used the product for more than one year (n=17; 39,5%), and with equal shares (n=13; 30,2%) the respondents used the product respectively less than one year and three months.

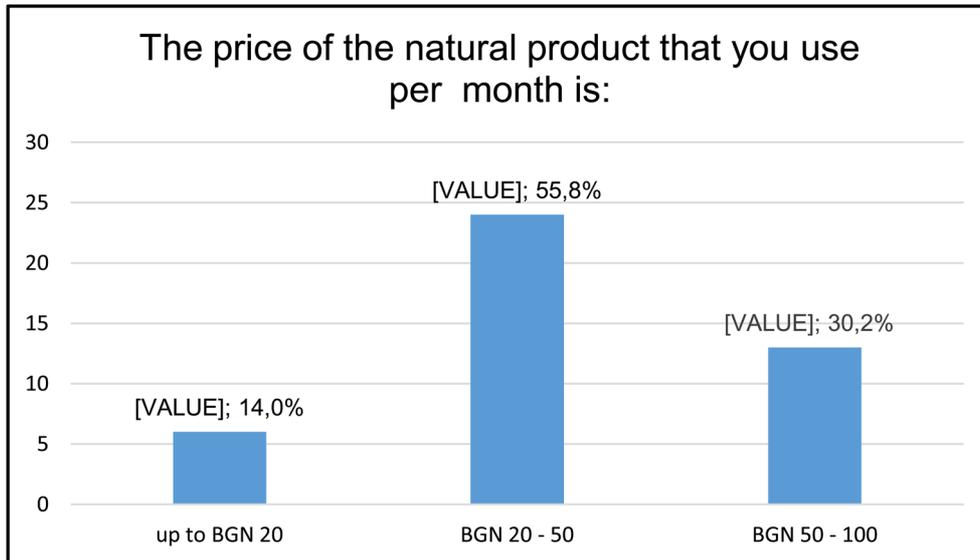
The relationship between the reported effectiveness of the natural product and the duration of its use is examined. From the respondents (n=10) who did not report im-

provement after/at the time taking the product, 6 women used the natural product under 3 months and 4 – more than one year. There are no definitive data to prove that the lack of the desired effect is due to the short-term intake. Respondents who report that there is an improvement in their condition use the product respectively: three months – n=17 (39,5%), 1 year – n=13 (30,2%) and more than 1 year

– n=13 (30,2%). Higher satisfaction with the effectiveness of the herbal preparation is reported for women who take it for a longer period. The funds that respondents pay within one calendar month for the natural product used are between BGN 20-50 among 24 of the respondents (55,8%)

and between BGN 50 – 100 for 13 (30,2%). The lowest share of women (n=6; 14,0%) spends up to BGN 20 on the herbal preparation and/or the nutrition supplement they use (Figure 3).

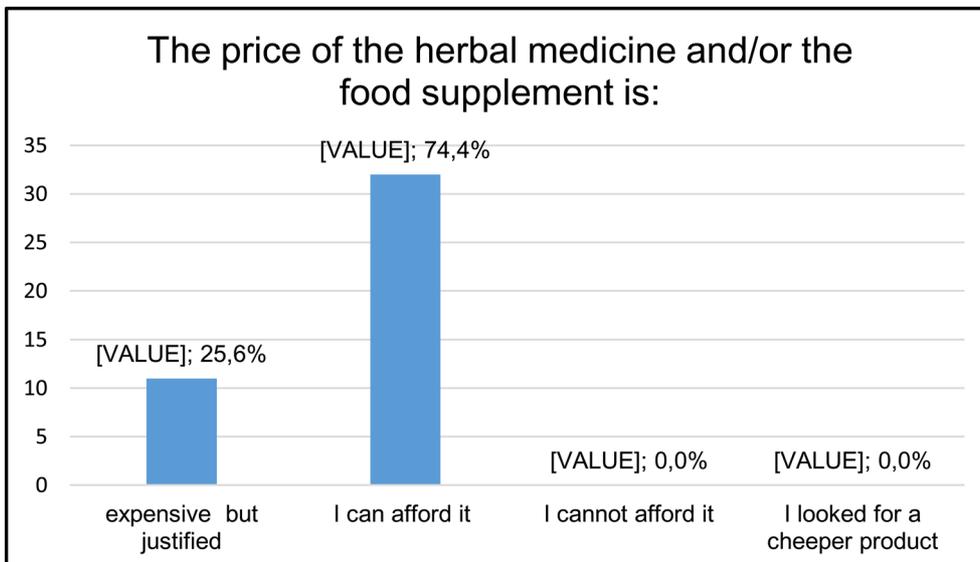
Fig. 3. The price respondents pay within a calendar month for the natural product used.



The majority of respondents are in the opinion that they can afford the price at which they purchase the herbal medicine and/or the food supplement (n=32; 74,4%) and the rest (n=11; 25,6%) of the respondents claim that the price is high but justified. None of the respondents answered

“I cannot afford it every month” or “I have looked for a cheaper option” (Figure 4). According to respondents, they would not replace the natural product to overcome menopausal symptoms because of the price.

Fig. 4. Defining the price of the herbal medicines and /or the food supplement concerning the solvency of users.



Considering the price of the natural product and respondents' attitude whether they would replace the product with another one, they are unanimous, that is confirmed by the correlation coefficient applied $r=-0.2, p < 0,19$. i.e. regardless of the price of the alternative product, the re-

spondents would not replace it with another.

According to the monthly income of respondents it is reported that half of them (n=26; 52,0%) have income between BGN 500 – 1000, 17 women (34,0%) between BGN 1000 – 1500 and with small equal shares are women

with less than BGN 500 (4,0%) and higher than BGN 1500 (4,0%).

No relationship $r=0.387$, $p < 0,15$ was detected between respondents' monthly income and the price of the natural product they take. It is also interesting to note that no direct relationship was observed between the monthly income of respondents and the way they define the price $r=-0.67$, $p < 0.69$. Regardless of how participants define the price of the product and what is their monthly income, they are willing to pay the price defined for the selected natural product. This is confirmed with the fact that respondents have defined the price as "expensive but justified" and "I can afford it" and no one defined the price as "I cannot afford it" or "I looked for a cheaper product".

Conclusions

- The study results confirm the trend described in the introduction concerning the increase in consumption of natural preparations for managing menopausal symptoms (86% of respondents).

- The herbal product and/or nutrition supplement that respondents take contain mostly calcium in combination with vitamin D, cranberry extract and evening primrose oil. To a lower extent, female respondents take preparations which contain soy phytoestrogens or silver candle herb.

- A big relative share of respondents (76%) reported for significant improvement in their health condition. There is a positive correlation between this indicator and the longer period of natural product intake.

- Regarding the subjective assessment of respondents about the price of the natural product they use, 74% of women claim that they can afford it. There is no direct relationship between the monthly income of respondents and the way they define the price.

The use of alternative therapies to manage menopausal symptoms is common among women aged over 35. The majority of them believe that the timely use of this kind of therapy is necessary and it takes into account the therapeutic effect of taking a natural product.

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