

ETHNOBOTANICAL STUDY OF THE ATTITUDES TOWARDS HERBAL REMEDIES AND CONVENTIONAL MEDICINES AMONG LOCAL POPULATION OF THE NORTH BLACK SEA COAST

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ABSTRACT

The interest in phytotherapy in Bulgaria has a longstanding tradition.

This ethnobotanical study aims to investigate the attitude of the local population of the North Black Sea coast area towards the use of plant-based products compared to conventional medications and to report the impact of various demographic indicators on it.

The survey was conducted in the period April - June 2015 in various urban and rural areas, using face-to-face interviews technique with random demographic selection of respondents, men and women of different social status and age. The Pearson correlation coefficient (r) was used for assessment of the impact of demographics on respondents' answers.

Maximum positive attitude has been declared by the highest percentage of respondents - 33.51 percent. Negative responses score a minimum of 0.54 percent. Demographics analysis presents moderate impact of age only. The percentage of respondents with a score of 10 is significantly higher for those aged over 41, compared to the ones under the age of 40.

Results vary in terms of '0' evaluation. Highest values were observed in the age groups of 41-50 and over 70.

The majority of interviewees - 75.68 percent, prefer combination therapy; 29.19 percent rely only on herbal remedies, and 12.97% indicate both answers.

The population of the North Black Sea coast area demonstrates a positive attitude towards the use of medicinal plants and herbal remedy treatment. A clear case position has been defined: 100 percent use of medicinal plants for prophylactic purposes, treatment – use of herbal remedies in combination with medications.

Keywords: *ethnobotany, herbal remedies, medicinal plants, North Black Sea coast*

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INTRODUCTION

In Bulgaria, traditional knowledge on medicinal plants and their use is declining, consistent with a worldwide trend in this regard (1). However, results from recent studies in different regions of the country showed a positive attitude among Bulgarians towards medicinal plants and traditional remedies (2).

A growing interest in phytotherapy based on a long-standing tradition has been observed (3).

This ethnobotanical study aims to explore the attitude of the local population from the North Black Sea coast area towards the use of plant-based products compared to conventional medications with account for the impact of various demographic indicators such as gender, age, education and residence.

MATERIALS AND METHODS

The survey was conducted in various towns and villages of the North Black Sea coast in the period April - June 2015, using face-to-face interviews technique consistently applied in similar studies (4,5), with random selection of respondents – aged from 20 to over 70, males and females with different educational status.

The set of questions for assessing the attitude

Table 1. Impact of demographic characteristics of respondents (n = 185) on their answers

Question	Demographic characteristics							
	Gender		Age		Education		Residence	
	P	r	P	r	P	r	P	r
Would you prefer plant-based products over conventional medications?	P>0.05	r=0.20	P≤0.05	r=0.55	P>0.05	r=0.37	P≤0.05	r=0.19
Would you prefer herbal treatment only or a combination therapy with medications as well?	P≤0.05	r=0.18	P>0.05	r=0.28	P>0.05	r=0.21	P>0.05	r=0.10

* P – Statistical difference between expected and observed frequencies; P≤0.05 – significant, P>0.05 – non significant; r – Pearson's coefficient; 0<r<0.3 – weak correlation, 0.3<r<0.5 – moderate correlation, 0.5<r<0.7 – significant correlation

towards traditional treatment with plant-based products compared to the use of conventional medicine drugs was as follows:

1. Would you prefer use plant-based products over conventional medications? – grade the answer from 0 to 10.
2. Would you prefer herbal treatment only or a combination therapy with medications as well? – include your comment.

Chi-square test was used for results analysis. Pearson's coefficient (r) was used for assessment of the impact of various demographic indicators on respondents' answers (2,6).

RESULTS AND DISCUSSION

A total of 185 interviews in 11 towns and 9 villages of the North Black Sea Coast area were conducted. Respondents were men and women of different social status and age.

Would you prefer plant-based products over conventional medications?

A maximum positive grade of 10 has been declared in the answers of the highest percentage of respondents - 33.51 percent. Only 5.95 percent of respondents gave a negative grade of 0. The share of positive grades in the range from 6 to 10 is twice as high (73.71%) than the one in the range from 0 to 5 (35.65%). Results indicate a positive attitude amongst the local population towards plant-based products. Demographic analysis displays moderate impact of age only on respondents' answers (Table 1).

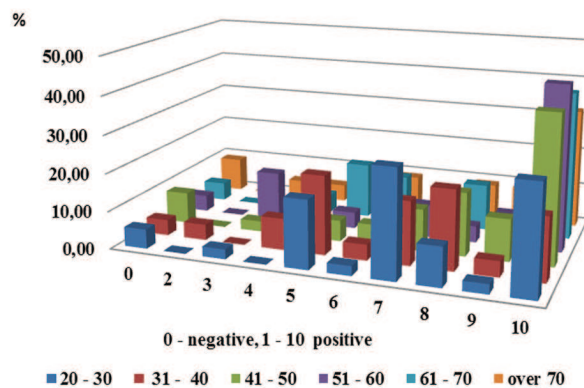


Fig. 1. Age impact on responses to the question "Would you prefer plant-based products over conventional medication?"

The percentage of respondents with a grade of 10 is distinctly higher for interviewees aged 41+, compared to the ones below 40 years of age.

Results with grade '0' are variable. Highest values are observed in the age groups of 41-50 and over 70.

The above-mentioned indicates a clear positive attitude demonstrated by the 41+ age groups. Younger generation's attitude varies at a scale from 0 to 10, and compared to the older age groups, the percentage of those with a negative attitude and the ones with a maximum positive attitude is approximately twice as low.

The attitude of younger interviewees below 40 years of age widely varies on the scale from 0 to 10, while age groups of 41+ years old show an explicit attitude.

The above-mentioned can be explained with a better health status of younger age groups which makes them less interested in the pros and cons of different ways of treatment compared to the adult and aging population vulnerable to diseases and higher rates of sicknesses (Fig. 1).

Demographic analysis indicates low impact of residence on respondents' attitudes towards plant-based products, while education and gender impact are statistically insignificant. Regardless of gender and education, the share of interviewees with maximum positive attitude towards plant-based products is much larger than that of interviewees with negative attitudes (Fig. 2 and 3).

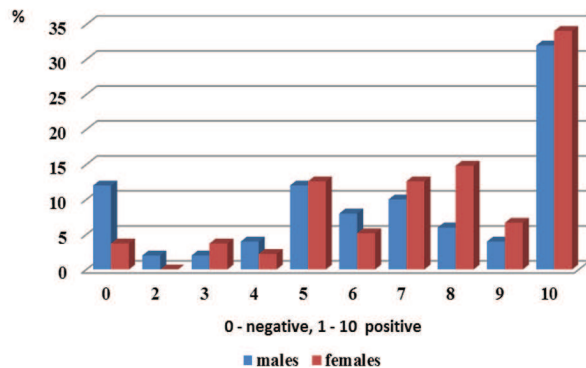


Fig. 2. Gender impact on responses to the question "Would you prefer plant-based products over conventional medication?"

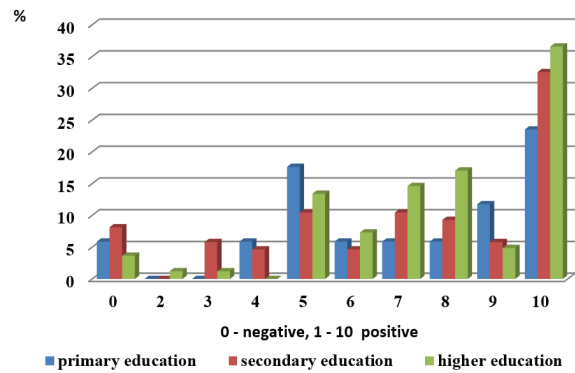


Fig. 3. Education impact on responses to the question "Would you prefer plant-based products over conventional medication?"

Would you prefer herbal treatment only or a combination therapy with medications as well?

The results display that the majority of respondents (75.68%) favour the combination therapy; 29.19 percent of the interviewees rely on herbal remedies only, and 12.97% of respondents indicate both options. The statistical analysis of responses to the question above does not manifest any significant impact of demographic indicators (Table. 1).

Consistent with the reasoning for preference of the combination therapy, the interviewees favouring it can be divided into two groups:

- ◆ The first group of respondents who expressly prefer the combination therapy state that "medicinal plants require extended time of use", "medicinal plants are more like a preventive health measure", "medicinal plants are only supplemental to treatment", "combination therapy grants greater protection and efficiency". Otherwise stated, they do not deny the benefits of herbal treatment but are adamant that herbal treatment only is not enough.
- ◆ The second group of respondents favouring the combination therapy choose herbal remedies as a first option of treatment followed by conventional medications intake in the event of more serious disease due to their consideration that herbal remedies are not effective enough in cases of disease aggravation.

It is worth noting the relatively high percentage of respondents who rely entirely on herbal treatment - 29.19%. In all likelihood, these respondents favour healthy lifestyle and adhere to the conviction

that “there is a particular medicinal plant to ease every pain”. They put their trust in herbal treatment for “herbal remedies perform slowly but surely”, “have fewer side effects“, „medicinal plants are naturally clean”, and „put 100% trust in medicinal plants for prevention”. Depending on the progress of the disease, not a few of them turn to a combination with conventional medications.

Respondents indicating both options in the survey clarify that they rely exclusively on herbal treatment only in the beginning. At a later stage they proceed with a combination therapy for better health protection, which partially overlaps with the second group interviewees favouring the combination therapy.

The results as a whole confirms the growing popularity of phytotherapy reported in recent decades worldwide (2,7,8).

CONCLUSION

Survey results establish the challenges which the North Black Sea coast population is facing in the medium of modern medicine and pharmaceutical industry achievements by having to choose between herbalism and combining it with conventional medications. “100 percent use of medicinal plants for prophylactic purposes, but combination therapy for treatment of diseases” is defined as an unequivocal standpoint. The high percentage of respondents depending entirely on medicinal plants and the negligible demographic impact demonstrate a positive attitude towards medicinal plants and plant-based products treatment. This, in turn, confirms the growing popularity of phytotherapy reported in recent decades worldwide (2,7,8).

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