



Prevalence and use of herbal products in the Czech Republic: Over-the-counter survey among adult pharmacies clients

Karel Knotek^{a,b}, Vladimir Verner^c, Petra Chaloupkova^c, Ladislav Kokoska^{a,d,*}

^a Department of Crop Science and Agroforestry, Institute of Tropics and Subtropics, Czech University of Life Sciences Prague, Kamycka 129, 165 21 Prague 6 – Suchdol, Czech Republic

^b GILIA, Kmochova 27, 400 11 Usti nad Labem, Czech Republic

^c Department of Economic Development, Institute of Tropics and Subtropics, Czech University of Life Sciences Prague, Kamycka 129, 165 21 Prague 6 – Suchdol, Czech Republic

^d Department of Zoology and Fish Farming, Faculty of Agrobiology, Food and Natural Resources, Czech University of Life Sciences Prague, Kamycka 957, 165 21 Prague 6 – Suchdol, Czech Republic

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Self-treatment;
Consultancy;
Co-medication;
Traditional knowledge;
Population survey;
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Summary

Objectives: To analyse which species of herbs are preferred by Czech adult respondents, the most important predictors influencing their use, and information sources used.

Method: Data were collected face-to-face via an interviewer-administrated structured questionnaire from convenience sample of adults from metropolis, as well as peri-urban and rural areas, from February to June 2007.

Results: There is a high prevalence (56.6%) of herbal product (HPs) use as well as herb-drug co-medication without frequent physician consultation. Literature is the main source of herbal product information, followed by mass media (20%) and family tradition (12%). In comparison to other countries, differences in urban–rural perspectives were observed regarding information sources as well as preferences of local herb species. *Mentha × piperita* (18.4%), *Melissa officinalis* (12.4%), *Plantago lanceolata* (12.2%), *Tilia cordata* (11.8%) and *Matricaria recutita* (10.7%) are the most preferred herb species for herbal products preparation. Gender, educational status and age are significant factors that influence the number of herb species used. Head or chest colds, stomach or intestinal illnesses and immunity and regeneration support are the most common ailments treated by herbal products according to our respondents.

* Corresponding author at: Department of Crop Science and Agroforestry, Institute of Tropics and Subtropics, Czech University of Life Sciences Prague, Kamycka 129, 165 21 Prague 6 – Suchdol, Czech Republic. Tel.: +420 2 2438 2180; fax: +420 2 3438 1829.

E-mail address: kokoska@its.czu.cz (L. Kokoska).

Conclusion: High utilisation of herbal products was confirmed and the most important predictors of use were identified. Further research is needed to validate and/or replicate our results. Our survey may provide a basis for pharmacists, physicians, healthcare providers as well as for policy makers to effectively manage increasing prevalence of herbal products among the Czech population.

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Introduction

Herbal products (HPs), defined as any kind of preparation containing either raw or processed ingredients based on one or more herbs used by consumers for self-treatment purposes, illness prevention and/or improving healthy lifestyle, are generally considered an inseparable part of traditional medicine, particularly in developing countries. However, their importance has been documented in higher-income countries as well.^{1–6} Predictors that influence the prevalence and attitudes of the population towards HP utilisation vary from country to country, from region to region, and among income groups.^{7,8} Therefore, they have attracted the attention of producers and marketing strategy-makers from both the pharmaceutical and food industry.^{9–11}

Within the area of the Czech Republic (CZ), the recent tradition of using herbs for medicinal purposes has always followed the development of Western Europe. The first professional Czech writings reflecting herbal medicine utilisation were published in the 1500s.^{12,13} The following centuries witnessed economic and technological developments that positively impacted living standards and health care of the population. However, frequent military conflicts, political instability and regional income disparities during the 19th and 20th centuries have intensified the prevalence of HP use for treatment and/or prevention of minor ailments, as well as seasonal and chronic illnesses.^{14,15} The use of HPs by the Czech population has recently become a highly discussed issue among pharmacists, particularly with special regard to the harmonisation of Czech legislation with European Union (EU) standards. The lack of relevant and scientific data on the prevalence and attitudes of the population in different regions of the country has been recognised as a hot issue as well, particularly in contrast to the long-standing tradition of HPs collection and use.^{13–16} Thus, we decided to carry-out a study to determine (i) which species of herbs are preferred by Czech adult respondents, (ii) what the most important predictors influencing HP utilisation are and (iii) what are the information sources that influence Czech adult perception of herb utilisation.

Methods

Target subjects and sampling methods

The study was based on a convenient sample of adults from both metropolis and peri-urban and rural areas of CZ to cover different cultural and socio-economic situations of the whole country. Participants, adult people visiting one of the chosen pharmacy-store and purchasing over-the-counter certain HPs, were approached by our research team specialists recruited out of the trained pharmacy personnel and given a quick description of the survey. The

main criteria for inclusion into our study were purchasing at least one HP within 12 months prior to the interview, adult age and willingness to participate in our study. From 1167 addressed respondents, 1000 (85.69%) met the requirements and were identified for our survey. Face-to-face interviews were conducted via interviewer-administrated structured questionnaire (see Table 1). Development of the questionnaire was based on experiences of the authors and modified according to recent studies linked to the analogous issue.^{3,4,7,17} Data were collected from February to June 2007.

Study design and data analysis

First, respondent's general attitudes, knowledge, species preferences, experiences, importance, consultancy as well as health problems cured by HPs were obtained. Furthermore, data on information sources used by our respondents on HP accessibility and effects were gathered. Then, demographic and socio-economic data of the respondents were collected as well, focussing on gender, age, educational level, physical activity level, expected out-of-pocket cash expenses on HP per one visit in a specialised store and whether the respondent considered him/herself as a smoker or non-smoker. Finally, self-collection, self-treatment and self-education practice were observed. In the case of multiple questions, maximum three answers were allowed without any preference ranking. Descriptive statistics such as percentages and means were used to describe the sample on the various variables.

Results

As a result of this study, the typical Czech adult user of HP can be described as a female with secondary education status, between 31 and 60 years of age, non-smoking and from the metropolis. In contrast to this, the prevalence of using herbs among young men below the age of 30, with primary education, smokers and less physically active is very low. Sixty percent of intended individual out-of-pocket-expenses per one visit in pharmacy on HPs do not exceed €10, which is equal to 7% of average week net per capita income. Details on demographic and socio-economic background of the respondents included in our survey are shown in Table 2.

According to our results, majority of the respondents (56.6%) consider the using of HPs as a very important instrument for their health and 21.4% stressed the unsubstitutable role of herbs for their life. In addition, every second respondent uses HPs to support the effect of a conventional medicine and almost one-fifth of the respondents do not believe that the conventional drugs alone can solve their health problems without some co-medication with certain

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