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The use of herbal remedies in urban and rural areas of the Setúbal Peninsula (Portugal): A study among elders

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The peninsula of Setúbal includes large-medium and small cities closely webbed with the nearby capital of Portugal that coexist within short distances with rural areas comprising natural, well preserved landscapes included natural parks.

Restricted to the privileged source of information on medicinal plants that elders represent, the objectives of this study were 1) the characterization of herbal remedies still in use, 2) the comparison of patterns of use between urban and rural inhabitants, 3) the understanding of how the knowledge on herbal remedies was acquired and transmitted.

Materials and methods

A total of 102 semi-structured interviews have been made with 121 informants from 3 sub-areas previously defined in Setúbal peninsula as urban, coastal, and rural/mountainous (Fig.1). Interviews were mostly done in senior societies and senior day-care institutions. Whenever possible, plants were positively identified by standard methods including comparison with material from Herbarium LISU (Botanical Garden, Natural History Museum, University of Lisbon) where voucher specimens were deposited. Otherwise, a tentative identification of common names was based upon a variety of bibliographical sources as well as on information provided by herbal and natural product stores.

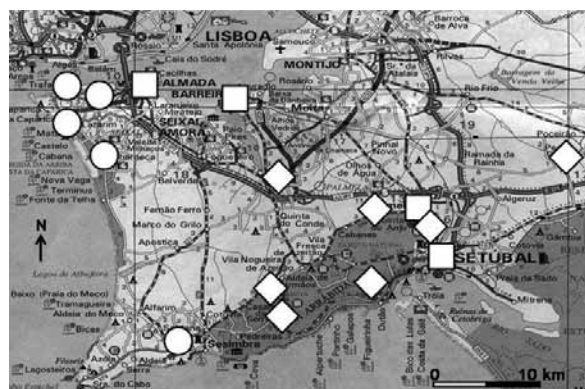


Fig. 1 Peninsula of Setúbal and sites where the interviews took place. Squares for urban, circles for coastal, diamonds for rural/mountain sites.

The structure of data was elucidated by correspondence analysis (Benzécri 1976). Automatic classification was done on reduced space by the mixed method using Ward's criteria of aggregation (Lebart, Morineau, and Piron 2000). Correspondence analyses and clustering were done using SPAD® procedures (Lebart et al. 1996).

Results

Informants were mainly women (86%), between 71 and 80 years old, generally born in Setúbal peninsula (46%), with four years or less of formal education (61%). When active, they had predominantly low skilled jobs. A great majority of them

harvested medicinal plants in the wild (83%) always for private purposes and used them on a regular basis (69%).

The number of plants referred in interviews ranged between 1 and 77 with a mean of 12. However, only six informants referred 30 or more plants.

All interviews combined, 253 different plants were named representing 66 botanical families, but only 10 species were simultaneously referred at least in 30 interviews. Lamiaceae, Asteraceae, Rosaceae, Fabaceae, Brassicaceae, and Apiaceae were the families more frequently cited, including alone more than 40% of the species.

Lemon scented verbena (*Aloysia triphylla* (L'Hérit.) Britt.) was the most frequently mentioned species (60 interviews), closely followed by lemon (*Citrus limon* (L.) Burm. f.), balm (*Melissa officinalis* L.), and mallows (*Lavatera cretica* L., *Malva* spp., and *Pelargonium graveolens* L'Hér.) mentioned respectively in 51, 51, and 50 interviews.

A total of 186 medicinal uses were referred. Among them, stomach, colds or flues, and digestion-related problems were mentioned the most, respectively for 45, 41, and 34 taxa.

The combination of references to species or groups of species and to medicinal uses ranked mallows as the most important group of plants (31 uses), followed by chamomiles (*Achillea ageratum* L., *Chamaemelum nobile* (L.) All., and *Matricaria* spp.), eucalyptus (*Eucalyptus globulus* Labill.), and balm with 27, 25, and 25 uses respectively.

Plants were usually harvested in spring and summer, in sites with very low human activity or in cultivated areas. They were generally consumed fresh or dried under shadow. Dried plants were considered by the informants as fit for use for periods longer than one year if protected from humidity. Complete aboveground parts were the most used (53% of the cases), followed by leaves (34%), and flowers alone (18%), mainly as 'tea' (infusions or decoctions).

As a rule, the consumption was topical and responsive to specific symptoms, without any regular schedule, and using ends as soon as the ailments disappear.

Knowledge about medicinal uses of plants was transmitted mainly within the family unit, especially through women and from mothers to daughters.

In addition, correspondence analysis and automatic classification on reduced space made clear the differences between informants living in rural and urban areas. Informants living in rural areas were characterized by having Setúbal peninsula as their birthplace, the lowest rank in formal education (less than four years), were or had been predominantly active in agriculture, used medicinal plants in a regular basis, and obtained them by cultivation or harvest in the wild. Opposed to the former, two classes could be identified, both predominantly urban and both composed by informants born outside Setúbal peninsula. One was characterized by a slightly higher level of formal education, mostly housewives, acquiring medicinal plants by harvest, purchase or receiving them as a gift. The second one, with the highest rank of formal education, professionally related to industries and services, with less than regular use of herbal medicines.

Discussion

Although this study is a first approach to the use of herbal remedies in Setúbal peninsula, the results clearly show that their use still represents an important practice, with a high number of informants turning to medicinal plants in a regular basis and are in agreement with those from other studies (Camejo-Rodrigues 2001; Novais 2002) recently carried out in areas where plant communities are relatively well preserved.

However, this study also shows that in spite of the high number of medicinal uses reported, the informants turn to herbal remedies predominantly when minor ailments are involved and, as reported by them, the use of plants with medicinal purposes frequently occurs in combination with industrial drugs and medicines. In addition, for a number of them, the use of herbal remedies is strongly related with past ways of living, namely those of their childhood and youth.

As the analysis of the interviews made clear, there is a strong, inverse relationship between the frequency of use and the urban way of living.

Therefore, the continuous trend towards urban life styles together with the advanced age of the informants strongly suggests that the knowledge about the medicinal properties of plants and the use of herbal remedies is in serious risk of sinking into oblivion in urban areas. This is neither surprising nor specific to the Setúbal peninsula (e.g. Naranjo 1995), where a high percentage of oblivion and ignorance was found among elders in this study.

However, the harvest of medicinal plants and the use of herbal remedies still prevail in rural areas. There, not only plants are more easily available but also necessity may play an important role in the maintenance of their use.

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