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Assessment of Consumer Perceptions in Ankara (Turkey) Toward Herbal Medicinal Products: A Survey Analysis in the Etimesgut District

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ABSTRACT

Objective: In the current study, we analyzed a survey on herbal medicinal product (HMP) use among 250 Turkish participants to provide an insight into how consumers have been considering and using non-prescription herbal medicines.

Methods: A cross-sectional survey of 250 consumers (56% males and 44% females) who had visited pharmacies in 2011 in Etimesgut (Ankara) was conducted. The findings were comparatively interpreted through statistical analysis using independent variables, including gender, age, educational status, profession, monthly income, and habitation with the participant answers.

Results: The results indicated that the participants trusted a physician's recommendation to use HMPs. However, only 8.8% of the participants have found the pharmacists to be sufficient in directing toward HMP use. Besides, they have preferred traditional herbalists and the pharmacies at an equal rate for purchasing herbal medicines.

Conclusion: This is the first survey study performed by a pharmacy faculty in Turkey aiming to determine the aptitude of people toward HMPs. The necessity to consult the role of pharmacists in the rational use of HMPs has been highlighted through the survey results.

Keywords: Natural product, survey, pharmacist, consumer, health, physician

1.INTRODUCTION

Plants have been utilized for healing purposes since ancient times and their popularity is still maintained due to their health-promoting effect in the modern times. Although the access rate to conventional medicines is markedly high in many countries, herbal medicinal products (HMPs) are also in great demand worldwide for health care (1). Several studies have been conducted on plants for their possible therapeutic effects, whereas some of them have remained with unproven pharmacological activity. Since communication sources in the present day, such as social and visual media, and internet, possess a high influence on preferences of consumers in many ways, HMPs have been a popular subject for these sources in terms of marketing and sales (2). In fact, many consumers consider HMPs as "if herbal, no harm," whereas the perception of most of the physicians on these products is "if herbal, no efficacy." Moreover, manufacturers offer a wide range of therapeutic effects attributable to HMPs, and these purported benefits fascinate consumers to perceive this kind of natural preparations, particularly against obesity, memory impairment, and sexual dysfunction, which seem to be a safer alternative to conventional drugs. Nevertheless, consumers and even pharmacists and physicians are not aware of unwanted, adverse, or side effects or even herb-drug interactions of HMPs in most of the cases, which generate a great risk to public health. Without any doubt, "natural/herbal" claim for any product does not guarantee at all it to be safe. Another concern with HMPs is quality control, efficacy, adulteration, and regulatory issues, which vary from country to country. Despite all these issues, consumers are still eager to use HMPs in a great demand as herbal therapeutics are rapidly becoming an inevitable part of mainstream health care. Consistently, large-scale survey studies in the USA revealed that individuals are demanding complementary and alternative medicine (CAM) therapies and use of HMPs with a growing interest (3, 4), while the quality is still the main issue for HMPs ranging from high to low due to intrinsic, extrinsic, and regulatory factors (5). In addition, another problem with HMPs is self-medication.

Several studies have examined the consumer tendency to HMPs use based on the criteria, such as gender, education, insurance, and social status. (6-9). However, only a few extremely small survey studies have revealed consumer inclination on HMPs in Turkey. There have been ongoing conflicts on the regulation and licensing issues of HMPs in Turkey between the Ministry of Health and Ministry of Food, Agriculture, and Animal Husbandry; eventually, efficacy, safety, quality control, licensing, and marketing guidelines

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were regulated according to Legislation of Traditional Herbal Medicinal Products in 2010 as authorized by the Ministry of Health. In contrast, dietary supplements are still under the control of Ministry of Food, Agriculture, and Animal Husbandry in our country. Nevertheless, the great demand of HMPs in the country creates a massive market for consumers through internet, television, and radio sales, and health stores as well as pharmacies, which is rather hard to control due to a great product variety. Hence, in the current work, we aimed to undertake a survey analysis on HMP use among 250 Turkish participants to provide an insight into how consumers have been considering and using non-prescription herbal medicines. For this purpose, a questionnaire of 21 questions was applied to all participants and the answers were statistically evaluated.

2. METHODS

2.1. Study Design

The participants (250 persons) were from residents of Etimesgut suburb located at the west of Ankara (Turkey) (Fig. 1), who came over to the pharmacies in the area during the year of 2011. Participants were recruited according to the simple random sampling method. Since the population of Etimesgut was 414,739 in 2011 according to the data provided by Turkish Statistical Institution, the minimum sample unit was calculated as 245 persons based on p=0.8 and q=0.2 values at the confidence level of 95%. A verbal explanation about the nature of the survey was provided to the participants by the pharmacists and their verbal consent was obtained.

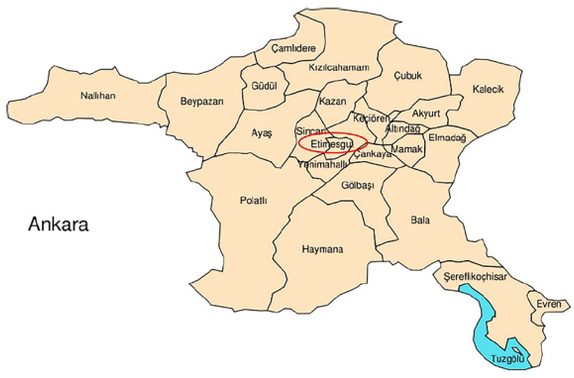

Figure 1. *Location of Etimesgut district in Ankara province (Turkey)*

2.2. Materials

This study was carried out in accordance with Helsinki Declaration of 1964, as revised in 2013 (Brazil). A questionnaire was designed to collect information on the inclination of participants toward HMPs. Each participant was provided with the questionnaire and requested to complete it independently without indicating the name. The survey consisted of 21 questions covering all alternative responses. The first 6 questions were aimed to get general demographic information, including sex, age, education, residence, monthly income, and profession, while rest of the questions prepared in accordance with a Likert scale focused on measuring the tendency of the participants against HMPs. For the Likert responses, all responses with any degree of agreement were grouped as positive responses, and all responses with any degree of disagreement were grouped as negative responses.

2.3. Statistical analysis

The collected data were analyzed using Statistical Package for Social Sciences for Windows 20 (IBM Corp. Released 2011, Armonk, New York, USA). Non-parametric tests were used in the analyses. Besides, the Chi-Square test was employed to determine the presence of a possible correlation between independent variables (demographic factors) and participant responses.

3. RESULTS

A total of 250 participants were requested to complete the questionnaire, and all of them responded to the survey. The respondents consisted of 44% females and 56% males, with a varying degree of education: 38.0% with high school, 36.8% university graduate, 8% postgraduate, 16% of primary/secondary school degree, and 2% of illiterate (Table 1). The age of the participants mostly ranged 26–31 (31.2%), 19–25 (25.2%), and 32–40 (20.8%) years; 32.4% of the participants had a minimum monthly wage from +1 to 1000 Turkish Lira (TL). Most of the participants (38%) declared their professions as worker, while 20.8% of them were civil servants and 15.6% included merchant/shopkeepers (Table 1).

Table 1. *Demographic data of the participants*

Participants (n=250)		%
Gender	Male	56
	Female	44
Age, years	14 and below	1.2
	15-18	4.0
	19-25	25.2
	26-31	31.2
	32-40	20.8
	41-50	10.4
	51-60	6.0
	61 and over	1.2
Educational status	Illiterate	2.0
	Primary and secondary school	16.0
	High school	38.0
	University graduate	36.0
	Postgraduate	8.0
Residential area	City center	60.0
	County	38.4
	Suburb	1.2
	Village	0.4

Monthly income, TL	1– Minimum wage	22.0
	Minimum wage +1 TL – 1000 TL	32.4
	1001 TL – 1500 TL	27.2
	1501 TL – 3000 TL	15.2
	3001 TL – 6500 TL	1.2
	6500 TL and over	2.0
Profession	Doctor–engineer–lawyer	2.8
	Merchant–shopkeeper	15.6
	Teacher–academician	2.8
	Farmer	1.2
	Civil servant	20.8
	Housewife	4.8
	Student	10.0
	Worker	38.0
	Other	4.0

TL: Turkish Lira

The study had a response rate of 100.0%. The response of the participants to the question "which one (pharmacies or local herbal product sellers) do you prefer to purchase any herbal medicinal products from?" is given in Table 2 according to the independent parameters, including gender, age, educational status, residential area, monthly income, and profession. According to the data, 56.0% of the male participants and 44.0% of the female participants preferred to purchase HMPs from pharmacies, mostly in dried/fresh/powdered plant form rather than any pharmaceutical formulation. The data given in Table 2 were similar considering all parameters. Most of the participants chose to use HMPs as cosmetics or vitamins, while the use of HMPs against internal disorders was also quite common among the participants aged 51–60 (40%) years and residents in suburbs (33.0%; Table 3); the Chi-square results are presented in Table 4. Vitamin use was observed to be higher among the participants from the professional group of doctors–engineers–lawyers (42.9%). Among the groups of farmers (66.7%), workers (47.4%), and teacher–academicians (42.9%), use of HMPs in cosmetics form was highly popular. According to Table 5, 62.9% of the male and 60.9% of the female participants expressed to be influenced by their physicians in their choice of HMP use. Interestingly, pharmacists had an impact on only 7.1% of the male and 10.9% of the female participants, whereas they had no effect on the professional groups, such as doctors–engineers–lawyers, teacher–academicians, and farmers (0%). Although social and visual media are very effective in encouraging people for HMP use in advertorial and unconscious ways in Turkey, the media seemed to have a low effect on our participants. However, the highest proportion of the participants influenced by media (33.3%) as well as friends (33.3%) belonged to the participants living in suburbs. The chi-square results for Table 5 according to the parameters age, educational status, residential area, monthly income, and profession are presented in Table 6. Considering the total data represented in Table 7, 62.8% of the participants declared not using any herbal preparations for the health effect. In fact, 50% of them preferred to purchase HMPs from pharmacy, although the effect of pharmacists appeared to be no or minimal on consumer behavior for HMP use. Traditional herbalists who have always played a significant role in the formation of Anatolian folk medicine were the choice of the other half (50%) of the participants as a place to purchase HMPs. Consistent with Table 2, only 21.6% of them preferred to buy these products in a pharmaceutical form. Following vitamins, HMPs have been popular for use against internal disorders (Table 2). The influence of physicians on consumer choice for HMP use was rather superior (62.0%) compared to pharmacists (8.8%; Table 5). From this viewpoint, the influence of traditional herbalists was close to that of pharmacists (8.4%).

Table 2. Data on preference of purchase places and type of HMPs by the participants

Independent parameters		Preference of purchase place of HMPs (%)		Preference of type of HMPs (%)	
		Pharmacy	Local herbal markets	Dried/ fresh/powdered plant material	Pharmaceutical formulations (tablet, syrup, capsule, etc.)
Gender	Male	56.0	44.0	81.4	18.6
	Female	44.0	56.0	74.5	25.5
Age, years	14 and below	100.0	0.0	0.0	100.0
	15-18	70.0	30.0	80.0	20.0
	19-25	63.5	36.5	82.5	17.5
	26-31	44.9	55.1	82.1	17.9
	32-40	42.3	57.7	69.2	30.8
	41-50	34.6	65.4	88.5	11.5
	51-60	40.0	60.0	80.0	20.0
	61 and over	100.0	0.0	33.3	66.7
Educational status	Illiterate	100.0	0.0	80.0	20.0
	Primary and secondary school	60.0	40.0	75.0	25.0
	High school	51.6	48.4	80.0	20.0
	University graduate	42.2	57.8	78.9	21.1
	Postgraduate	45.0	55.0	75.0	25.0
Residential area	City center	50.7	49.3	79.3	20.7
	County	49.0	51.0	79.2	20.8
	Suburb	33.3	66.7	0.0	100.0
	Village	100.0	0.0	100.0	0.0
Monthly income, TL	1 –minimum wage	58.2	41.8	76.4	23.6
	Minimum wage +1 TL – 1000 TL	53.1	46.9	82.7	17.3
	1001 TL – 1500 TL	42.6	57.4	77.9	22.1
	1501 TL – 3000 TL	50.0	50.0	71.1	28.9
	3001 TL – 6500 TL	0.0	100.0	66.7	33.3
	6500 TL and over	40.0	60.0	100.0	0.0
Profession	Doctor–engineer–lawyer	57.1	42.9	57.1	42.9
	Merchant–shopkeeper	59.0	41.0	82.1	17.9
	Teacher–academician	14.3	85.7	85.7	14.3
	Farmer	66.7	33.3	100.0	0.0
	Civil servant	40.4	59.6	75.0	25.0
	Housewife	41.7	58.3	75.0	25.0
	Student	68.0	32.0	80.0	20.0
	Worker	50.5	49.5	76.8	23.2
	Other	40.0	60.0	100.0	0.0

TL: Turkish Lira; HMP: Herbal medicinal product

Table 3. *Data (%) on preferred uses of HMPs by the participants*

Independent parameters		Cosmetics	Skeletal system	Obesity	Oncological disorders	Internal disorders	Vitamins	Asthma–Bronchitis	Other
Gender	Male	26.4	5.0	7.9	0.7	16.4	23.6	3.6	16.4
	Female	52.7	5.5	5.5	0.9	10.9	14.5	1.8	8.2
Age, years	14 and below	0.0	0.0	0.0	0.0	33.3	66.7	0.0	0.0
	15-18	40.0	0.0	20.0	0.0	10.0	30.0	0.0	0.0
	19-25	50.8	3.2	3.2	0.0	7.9	20.6	0.0	14.3
	26-31	39.7	6.4	7.7	2.6	12.8	20.5	2.6	7.7
	32-40	42.3	5.8	9.6	0.0	9.6	13.5	3.8	15.4
	41-50	19.2	7.7	3.8	0.0	23.1	23.1	3.8	19.2
	51-60	6.7	6.7	6.7	0.0	40.0	13.3	13.3	13.3
	61 and over	0.0	0.0	0.0	0.0	33.3	0.0	0.0	66.7
Educational status	Illiterate	40.0	0.0	0.0	0.0	40.0	0.0	0.0	20.0
	Primary and secondary school	30.0	2.5	7.5	0.0	17.5	25.0	12.5	5.0
	High school	35.8	5.3	8.4	2.1	14.7	15.8	1.1	16.8
	University graduate	44.4	6.7	5.6	0.0	12.2	16.7	1.1	13.3
	Postgraduate	35.0	5.0	5.0	0.0	5.0	45.0	0.0	5.0
Residential area	City center	39.3	4.0	6.7	0.7	10.0	23.3	1.3	14.7
	County	37.5	7.3	7.3	1.0	19.8	13.5	4.2	9.4
	Suburb	0.0	0.0	0.0	0.0	33.3	33.3	33.3	0.0
	Village	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Monthly income, TL	1 –minimum wage	40.0	9.1	7.3	0.0	14.5	18.2	1.8	9.1
	Minimum wage +1 TL – 1000 TL	44.4	2.5	7.4	1.2	9.9	18.5	2.5	13.6
	1001 TL – 1500 TL	39.7	5.9	2.9	1.5	16.2	19.1	5.9	8.8
	1501 TL – 3000 TL	21.1	5.3	10.5	0.0	18.4	26.3	0.0	18.4
	3001 TL – 6500 TL	33.3	0.0	0.0	0.0	0.0	33.3	0.0	33.3
	6500 TL and over	20.0	0.0	20.0	0.0	20.0	0.0	0.0	40.0
Profession	Doctor–engineer–lawyer	14.3	0.0	0.0	0.0	14.3	42.9	0.0	28.6
	Merchant–shopkeeper	30.8	2.6	7.7	0.0	12.8	35.9	0.0	10.3
	Teacher–academician	42.9	14.3	0.0	0.0	28.6	14.3	0.0	0.0
	Farmer	66.7	33.3	0.0	0.0	0.0	0.0	0.0	0.0
	Civil servant	26.9	5.8	5.8	1.9	17.3	21.2	7.7	13.5
	Housewife	41.7	16.7	8.3	0.0	25.0	8.3	0.0	0.0
	Student	28.0	4.0	8.0	4.0	8.0	32.0	0.0	16.0
	Worker	47.4	4.2	7.4	0.0	13.7	10.5	3.2	13.7
	Other	60.0	0.0	10.0	0.0	0.0	10.0	0.0	20.0

TL: Turkish Lira; HMP: Herbal medicinal product

Table 4. *Chi-square results for the responses obtained from Table 3 for gender, age, educational status, and profession*

Gender	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.638	7	.006
Likelihood Ratio	19.846	7	.006
Linear-by-Linear Association	17.269	1	.000
Number of Valid Cases	250		
Age			
Pearson Chi-Square	61.938	49	.102
Likelihood Ratio	61.736	49	.105
Linear-by-Linear Association	8.096	1	.004
Number of Valid Cases	250		
Educational status			
Pearson Chi-Square		28	.052
Likelihood Ratio	37.000	28	.119
Linear-by-Linear Association	1.206	1	.272
Number of Valid Cases	250		
Profession			
Pearson Chi-Square	58.096[a]	56	.398
Likelihood Ratio	61.104	56	.298
Linear-by-Linear Association	4.480	1	.034
Number of Valid Cases	250		

Df: Degrees of freedom; Asymp. Sig: Asymptotic significance

4. DISCUSSION

The use of HMPs is increasing worldwide, whereas the adverse effects and drug-herb interactions are also well realized. However, physicians seem unaware of these interactions. Turkey is one of those countries with a stable demand for the use of HMPs. The physicians do not believe much in the curative effect of herbal remedies compared to other CAM therapies (10, 11). However, only in some countries, such as Germany, physicians are qualified or educated well about CAM and recommend and prescribe these remedies to their patients as well as apply it in their daily practice (12). Moreover, pharmacists may not be considered the ideal consultants in terms of use of HMPs and other CAM applications, which is consistent with our data. Although women have been reported to have a higher propensity toward the use of HMPs (6, 7, 13, 14), gender was not an indicator for the use in our study. According to the Harvard survey study performed by Eisenberg et al (3), the frequency of CAM usage was 44% in the USA with users aged 25–49 years, which is in accordance with our current data. Another survey study conducted with 231 patients residing in Sant'Andrea in Italy indicated that 35.5% of the patients expressed to use herbal preparations, while 72% of them confessed not to be aware of their side or adverse effects as well as drug interactions (15).

Similar to our study, internal disorders were the most preferred disease group for using HMPs (38.1%) among the participants in Brazil (16), wherein 30% of them bought the plant materials from free markets. In our case, with the question "where do you prefer to buy HMPs?," 44 (56%) of the males and 56 (44%) of the female responders reported to purchase from the local herbal markets and pharmacies, respectively, (Table 2). According to a report on herbal remedies sold in Palestine for breast cancer treatment (17), only 1.4% of the patients favored to buy the herbal remedies from pharmacies. In another study conducted in Kayseri, Turkey, a positive correlation was observed between the educational status and inclination of herbal remedy use among patients, while 39% of them reported to have reduced blood glucose levels after using self-medicated herbal remedies (18). However, our survey findings indicate that the participants mostly rely on the recommendation by their physicians to use any herbal remedies (Table 5). Moreover, we observed that the preference

Table 5. *Data (%) on who influences the participants for purchase for HMPs*

Independent parameters		Physician	Pharmacist	Local herbal markets	Internet	Media	Friend	Other
Gender	Male	62.9	7.1	7.1	7.1	5.7	7.9	2.1
	Female	60.9	10.9	10.0	7.3	4.5	6.4	0.0
Age, years	14 and below	66.7	33.3	0.0	0.0	0.0	0.0	0.0
	15-18	50.0	10.0	10.0	10.0	10.0	10.0	0.0
	19-25	69.8	7.9	1.6	6.3	4.8	7.9	1.6
	26-31	61.5	6.4	10.3	9.0	2.6	10.3	0.0
	32-40	59.6	13.5	11.5	5.8	5.8	1.9	1.9
	41-50	57.7	3.8	7.7	7.7	15.4	7.7	0.0
	51-60	53.3	13.3	13.3	6.7	0.0	6.7	6.7
	61 and over	66.7	0.0	33.3	0.0	0.0	0.0	0.0
Educational status	Illiterate	40.0	20.0	0.0	20.0	0.0	0.0	20.0
	Primary and secondary school	55.0	10.0	15.0	2.5	7.5	7.5	2.5
	High school	57.9	14.7	8.4	5.3	6.3	6.3	1.1
	University graduate	67.8	2.2	6.7	12.2	3.3	7.8	0.0
	Postgraduate	75.0	5.0	5.0	0.0	5.0	10.0	0.0
Residential area	City center	69.3	7.3	8.0	4.7	4.0	6.7	0.0
	County	52.1	11.5	9.4	11.5	6.2	7.3	2.1
	Suburb	33.3	0.0	0.0	0.0	33.3	33.3	0.0
	Village	0.0	0.0	0.0	0.0	0.0	0.0	100.0
Monthly income, TL	1 –minimum wage	63.6	7.3	14.5	5.5	5.5	1.8	1.8
	Minimum wage +1 TL – 1000 TL	61.7	11.1	6.2	8.6	2.5	9.9	0.0
	1001 TL – 1500 TL	64.7	8.8	5.9	4.4	5.9	10.3	0.0
	1501 TL – 3000 TL	60.5	7.9	7.9	10.5	7.9	2.6	2.6
	3001 TL – 6500 TL	0.0	0.0	33.3	33.3	0.0	33.3	0.0
	6500 TL and over	60.0	0.0	0.0	0.0	20.0	0.0	20.0
Profession	Doctor–engineer–lawyer	85.7	0.0	0.0	0.0	0.0	14.3	0.0
	Merchant–shopkeeper	59.0	5.1	12.8	10.3	5.1	5.1	2.6
	Teacher–academician	42.9	0.0	0.0	42.9	14.3	0.0	0.0
	Farmer	66.7	0.0	0.0	0.0	0.0	33.3	0.0
	Civil servant	55.8	13.5	11.5	1.9	3.8	13.5	0.0
	Housewife	58.3	25.0	8.3	8.3	0.0	0.0	0.0
	Student	56.0	12.0	8.0	8.0	8.0	8.0	0.0
	Worker	66.3	6.3	7.4	7.4	6.3	4.2	2.1
	Other	80.0	10.0	0.0	0.0	0.0	10.0	0.0

for pharmacists as herbal medicine consultant seems to be relatively low compared to physicians. In contrast, 72.71% of the female participants in an Italian survey study confessed not to consult with a health professional in case of using HMPs (19), which is contrary to our findings.

Several survey studies have pointed out the outcome that herbal medicines are usually used particularly by women with higher education (20-22), whereas some studies revealed no correlation between the educational status and HMP use (23, 24). Nevertheless, we have not obtained a clear finding from our own study. However, a correlation has been reported between HMP use and higher income (25, 26), which may lead to a conclusion that HMPs are affordable by people with higher income due to their generally high prices. Relevantly, it is also interesting to note that the Turkish individuals who participated in two separate multicentered international survey studies were observed to pay the highest price for HMPs, despite their relatively lower income among the countries that participated (27, 28).

Table 6. *Chi-square results for the responses obtained from Table 5 between gender, age, educational status, and profession*

Gender	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.341[a]	6	.631
Likelihood Ratio	5.451	6	.487
Linear-by-Linear Association	.484	1	.486
N of Valid Cases	250		
Age			
Pearson Chi-Square	31.837[a]	42	.873
Likelihood Ratio	32.604	42	.851
Linear-by-Linear Association	.345	1	.557
N of Valid Cases	250		
Educational status			
Pearson Chi-Square	40.729[a]	24	.018
Likelihood Ratio	33.793	24	.088
Linear-by-Linear Association	1.826	1	.177
N of Valid Cases	250		
Residential area			
Pearson Chi-Square	101.868[a]	18	.000
Likelihood Ratio	26.865	18	.082
Linear-by-Linear Association	12.859	1	.000
N of Valid Cases	250		
Monthly income			
Pearson Chi-Square	44.092[a]	30	.047
Likelihood Ratio	35.070	30	.240
Linear-by-Linear Association	2.505	1	.113
N of Valid Cases	250		
Profession			
Pearson Chi-Square	45.912[a]	48	.559
Likelihood Ratio	45.693	48	.568
Linear-by-Linear Association	.878	1	.349
N of Valid Cases	250		

Df: Degrees of freedom, Asymp. Sig: Asymptotic significance

Social and visual media seem to play a great role in manipulating consumers in their preferences to use HMPs in Turkey. In particular, some celebrities or apparently experts on HMPs, highly recommend about how and which herbs or HMPs to use on television. Hence, we also attempted to determine how much the participants were influenced by these factors in media. In contrast to our expectations, only 5.2% of the participants reported to be affected by media, while the internet had an influence of HMP use on only 7.2% of them (Table 7), which was supported by a correlation between educational status and HMP use according to our statistical data.

Table 7. *Total data on some attitudes of the participants*

	Response	%
Have you ever used HMP for any health benefit?	Yes	37.2
	No	62.8
Which one do you prefer to purchase as HMP?	Pharmacy	50
	Local herbal markets	50
Which type of HMP do you prefer to use?	Dried/fresh/powdered herbal materials	78.4
	Pharmaceutical formulations (tablet, syrup, capsule, etc.)	21.6
Which type of health problems do you prefer to use HMP for?	Cosmetics	38.0
	Skeletal system	5.2
	Obesity	6.8
	Oncological	0.8
	Internal	14.0
	Vitamins	19.6
	Asthma–bronchitis	2.8
	Other	12.8
Which one influences your choice on use of HMPs?	Physicians	62.0
	Pharmacists	8.8
	Local herb market owners	8.4
	Internet	7.2
	Media	5.2
	Friends	7.2
	Other	1.2

HMP: Herbal medicinal product

5. CONCLUSION

In our survey study to define inclinations toward HMP use in Etimesgut district of Ankara conducted with 250 participants, the results were evaluated in comparison to independent variables of gender, age, educational status, profession, monthly income, and habitation. Since the residents of this district who undertook the survey are considered to possess relatively higher educational status in the province of Ankara, the results on HMP use seemed to be closer to the ideal. Briefly, the participants desire to consult with physicians rather than pharmacists to use any HMP; consequently, this data point out the fact that we need to emphasize a more active role of pharmacists in herbal drug use consultancy and improve Turkish physicians' knowledge on herbal medicines. Since it appears that the Turkish people

usually have a marked demand to use herbs for therapeutic purposes, HMPs of a good quality should be licensed to prevent health risks. To the best of our knowledge, this is the first survey study to establish inclinations of the Turkish people on HMP use conducted by a pharmacy faculty.

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