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Help-Seeking Behavior and Self-Medication of a Population in an Urban Area in Turkey: Cross Sectional Study

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Aim. To define help-seeking behavior and self-medication among people with different symptoms and complaints in an industrialized urban area of Turkey.

Methods. This cross-sectional study was carried out in the city center of Kocaeli province, Western Turkey, in October-November 1998. To research help-seeking behavior in respect of secondary prevention and curative practices, we randomly selected households (N=812), interviewed the household members at their home, and recorded the reasons for visiting a pharmacy in 6 pharmacies (N=1,331 visits to pharmacy) in the Kocaeli region.

Results. The majority of the interviewed knew the meaning and importance of regular medical check ups, and only 7% had never undergone periodic check ups, mainly because of lack of interest or time. Self-medication was found to be the dominant mode of help-seeking behavior, especially in the case of pain. The proportion of unprescribed to prescribed drugs was 1:1.75, with analgetics, antipyretics, expectorants and antitussives as the most commonly requested unprescribed drugs.

Conclusion. A considerable amount of health care occured within the popular sector, with self-medication and pharmacist's advice as dominant modes of behavior. The health care system should take this into account when planning activities aimed at detection of disease.

Key words: *helping behavior, life style; medically underserved area; medicine, traditional; prescriptions, drug; public health; social behavior; Turkey*

Sociocultural changes and scientific developments have brought about changes in the concepts of disease, illness, and health (1,2). Furthermore, everyone has a personal and subjective perspective of his/her self, including a personal and subjective view of his/her disease (3), which is why people react to the illness differently (4). According to Kleinman (5), each society has some kind of a health care system as a network of relations among illness episodes, individual and social responses to disease, and beliefs and practices that link illnesses to recognized forms of therapy. Thus, a health care system encompasses all the therapeutic resources available to the ill and their families. Kleinman subdivides the system into three interrelated sectors (5): (a) the popular sector, which includes the beliefs and practices of lay-persons; (b) the professional sector, which encompasses the knowledge and practices of organized health agents, which represent cosmopolitan medicine and other institutionalized forms that are at the state level generally subject to review and licensing by the Ministry of Health; and (c) the folk sector, consisting of the knowledge and practices of health agents recognized as therapists by society, but not by the state in general.

In Turkey, most health services are provided by 3 largely autonomous systems (i) the Ministry of Health, (ii) the Social Insurance System, and (iii) the Medical Schools (6). Turkey has the population of over 62 million (7), with approximately 1 physician per 1,125 inhabitants (6). Around 65% of the population are covered with health insurance, whereas about 21.4 million inhabitants do not have health insurance (7). Almost 43% of the health service resources are allocated from the general budget of the Turkish Government (8), around 21% are collected through health insurance fees, whereas the remaining 36% are obtained from the people paying for the health services directly (8).

The aim of this study was to define help- seeking behavior, self-medication, and utilization of pharmaceuticals for different symptoms and complaints among the population in an industrialized, urban area of Turkey.

Subjects and Methods

This two-stage cross-sectional study was carried out in city center of the Kocaeli province, Turkey, in October-November 1998. In the first stage, cluster and systematic sampling methods were used to randomly select 900 households. Of those, 812 either agreed upon

be ing in ter viewed, or were found at home to be in ter viewed, or could co op er ate dur ing the in ter view. The sam ple size was de ter mined ac-cord ing to the World Health Or ga ni za tion guide lines (9). These 812 house holds rep re sented around 3,018 house holds in the city cen ter of Kocaeli at the time of the study. Their num ber and the map of the city were ob tained with per mis sion from the lo cal gov er nor. Parts of the city with prac ti cally no house holds (main roads with mar kets, of fices, pub lic build ings, and busi ness cen ters) were ex cluded from the study, and the streets where the num ber of homes ex ceeded the num ber of other buildings (schools, butchers, groceries, etc.) were included. Fifty seven streets ful fill ing this cri te rion were clas si fied as North ern, South ern, East ern, and West ern group of streets and 3 in terns pre vi-ously trained for the needs of this study cov ered each group. The first street to start the in ter view was de ter mined by draw ing lots. Then, the coins were tossed to de cide whether to take the right or the left side of the street, and whether to choose the houses with an even or an odd street num ber. Af ter the first street was fin ished, the next one was cho sen by draw ing lots from the streets clos est to it. The in terns in ter-viewed the sub jects at their homes. Dur ing these face-to-face in ter-views, which usu ally lasted 20-30 min utes, in terns filled out a pre-tested ques tion naire.

Be fore the study, the in terns were given in ter ac tive the o ret i cal train ing and un der went field train ing in one of the city cen ters of the prov ince of Is tan bul, which re sem bles the city cen ter of Kocaeli as far as the so cio eco nomic and cul tural sta tus of peo ple were con cerned. The ques tion naire de sign used for train ing was the same as the one used in the study. Pre test re sults were eval u ated in terms of du ra tion of trans port, du ra tion of reach ing the se lected sam ple unit, ques tion word ing, ques tion or der, tim ing, and du ra tion of the in ter view.

The ques tion naire was de signed to iden tify ba sic de mo graphic char ac ter is tics, ba sic util i ties of the dwell ing units, num ber of births within the household, labor force participation of the household mem bers, health sta tus of chil dren, prac tic ing pe ri odic check ups, use of self-medication, and help-seeking be hav ior in the pres ence of var i-ous symptoms and complaints. Both open-ended and close-ended ques tions were used. The an swers to the open-ended ques tions were clas si fied and coded af ter data were col lected. A to tal of 499 women and 313 men were in ter viewed, each as the most re spon si ble per son pres ent at home (the head of the house hold or the spouse) at the time of the house visit. The data on the ex pe ri ences and prac tices were col-lected from the in ter viewed per son only, and not from the other mem-bers of the house hold. In the sec ond stage, af ter di vid ing the city cen-ter again into 4 re gions – North ern, South ern, East ern, and West ern, 6 out of 21 phar ma cies lo cated in the area were ran domly se lected. There was one phar macy se lected in the East ern and one in the West-ern re gion, each within 5 ki lo me ters from any health care fa cil ity. Two phar ma cies in the North ern and two in the South ern re gion were se lected, one from the each re gion within 6-10 ki lo me ters from any health care fa cil ity, and the other dis tanced more than 10 ki lo me ters away. If a pharmacist refused to be included in the study, another phar macy with sim i lar char ac ter is tics was cho sen from the list of subs-ti tute phar ma cies by draw ing lots. Two in terns, from the group that made house vis its in that re gion, were as signed to each phar macy to col lect data. They sat in a cor ner of the phar macy be tween 8 a.m. and 8 p.m., fill ing ob ser va tion forms and re cord ing the rea sons for vis its and drugs re quested by the cus tom ers dur ing a 10-work-day pe riod. At the end of each day, the two in terns com pared the data they col-lected and ex cluded the ob ser va tion forms that were not con sis tent. Among the to tal of 1,347 ob ser va tion forms, 16 were ex cluded due to in con sis tency of the re corded data, and 1,331 ob ser va tions were con-sidered valid for the study. There fore, a to tal of 1,331 vis its in 10 work days were clas si fied and an a lyzed.

In sta tis ti cal anal y sis, chi-square test was used to com pare pe ri-odic checkup ex pe ri ences among age groups, as well as ac cord ing to gen der, ed u ca tion, and pos ses sion of health in sur ance.

Results

The socio-demographic char ac ter is tics of the pop u-la tion en com passed by this study are pre sented in Ta ble 1 in re la tion to their pe ri odic check ups. Al most 70% of the population knew the mean ing and im por tance of early diagnosis, whereas only 7% had attended a physician with out any com plaints, just for a checkup, at least once in their life. None of the re spon dents re ported go ing for reg u lar check ups. The per cent age of per sons hav ing ever ex pe ri enced pe ri odic check ups was sig nif i cantly higher among men (chi-square=7.232, $p<0.01$). It also in-creased with the ed u ca tional level of a per son (chi-square= 104.26, $p<0.001$), but did not dif fer in re gard to age or health in sur ance sta tus (chi-square=4.951, $p>0.05$, and chi-square=0.1503, $p>0.05$, re spec tively). Eighty per cent of the study pop u la tion had health in sur ance (Ta ble 1).

The main reason for not doing periodic checkups was re spon dent's neg li gence (Ta ble 2). Some of the re-spondents found it unnecessary or had no time for it, whereas a rel a tively small pro por tion of the study group stated eco nomic prob lems as the main rea son for not do-ing checkups. Lack of interest, knowledge, and time seemed to be more important reasons than the lack of money (Ta ble 2).

The most im por tant symp tom for seek ing a phy si-cian's help (Table 3) was "blood in the stool" (94.8%), and the least im por tant was "head ache" (10.6%). In gen-eral, self-medication was pre ferred in cases of sub jec tive symptoms such as head ache, dysuria, and abdominal pain (Ta ble 3). Visiting a phy si cian was the pre dom i nant mode of help- seeking be hav ior when there were ob jec-tive signs of disease, such as "blood in the stool" (94.8%), gen i to uri nary dis charge (69.0%), and skin rash (62.4%). None of the respondents would visit a non-physician health pro fes sional, ex cept a phar ma cist.

At tending a phar ma cist did not seem to be a sig nif i-cant mode of help-seeking be hav ior for any of the com-

Table 1. Periodic checkups (No, %) in an urban Turkish region with respect to subjects' basic demographic characteristics

	Periodic checkups		
Parameter	ever	never	total (100%)
Age (years)			
<29	8 (5.7)	131 (94.3)	139
30-39	17 (10.8)	140 (89.2)	157
40-49	14 (7.3)	177 (92.7)	191
50-59	11 (5.5)	189 (94.5)	200
>59	7 (5.6)	118 (94.4)	125
Total	57 (7.0)	755 (93.0)	812[a]
Gender			
Men	32 (10.2)	281 (89.8)	313
Women	25 (5.0)	474 (95.0)	499
Total	57 (7.0)	755 (93.0)	812[b]
Education			
Illiterate	3 (2.6)	112 (97.4)	115
Primary school	17 (3.6)	460 (96.4)	477
Secondary school	9 (6.1)	138 (93.9)	147
University	28 (33.7)	55 (66.3)	83
Total	57 (7.0)	755 (93.0)	812[c]
Having health insurance			
Yes	44 (6.7)	606 (93.3)	650
No	13 (8.0)	149 (92.0)	162
Total	57 (7.0)	755 (93.0)	812[d]

[a]Statistics: chi-square=4.951, p=0.292.
[b]Statistics: chi-square=7.232, p=0.007.
[c]Statistics: chi-square=104.26, p<0.001.
[d]Statistics: chi-square=4.951, p=0.292.

Table 2. The reasons for not attending periodic checkups

Reasons	n	%
Negligence	318	42.1
Not necessary	213	28.2
No time	140	18.5
Economic reasons	84	11.2
Total	812	100.0

plaints and symp toms. Phar ma cist's ad vice was used in cases of cough (10.4%), fe ver (62.0%), and pain in general. This find ing cor re sponded to the data col lected at the phar ma cies in the sec ond phase of the study.

During the 10-work-day period, 1,347 customers vis ited the 6 phar ma cies ran domly se lected in the same re gion. Out of these, 1,331 were found valid and con sistent for fur ther anal y sis. Al most a quar ter of all visitors asked for pre scribed drugs, whereas 40.3% asked for unprescribed drugs, by giv ing the spe cific names of the drugs, and 15.9% of the to tal re quests were for any med i ca tion, diet, or ad vice on a com plaint (Ta ble 4). The ra tio of the pre scribed to unprescribed drugs was 1:1.75.

The dis tri bu tion of re quests for a phar ma cist's advice re gard ing ma jor symp toms and com plaints is given in Ta ble 5. More than a half were for cough/sore throat or dermatologic problems (31.3% and 25.1%, re spectively). It seems that phar ma cies were the help-seeking places mainly for the peo ple who have cough ing, headache, abdominal pain, and chest pain. Unprescribed drugs re quested from the phar ma cies by name are presented in Table 6. Most commonly requested unprescribed drugs were analgesics, antipyretics, and drugs for re spi ra tory symp toms.

Discussion

This study showed that a small per cent age (7%) of the study group had at tended a phy si cian at least once in their lives for a checkup. Majority of the group knew why and how the early de tec tion of dis ease was im portant, but had not at tended a pro fes sional, mainly due to the lack of interest or time. This finding worries the health care sys tem be cause the early de tec tion of a disease dur ing the asymp tom atic stage (sec ond ary pre vention) is be lieved to re duce the med i cal, so cial, and psycho log i cal costs of a dis ease (10,11). Men and more ed ucated per sons seemed to be more in ter ested in such practices.

Health pro fes sion als may plan early de tec tion ac tivi ties in terms of pop u la tion screenings or reg u lar checkups. On the other hand, peo ple's con cepts of health and illness are the key issues for the cost-effectiveness of such ac tiv i ties. Nu mer ous sociocultural and behavioral factors, perception and interpretation of illness symptoms have a great in flu ence on health (3). A con cept of illness (interpretation, explanation, and pre dic tion with re gard to one's health sta tus) can be de scribed un der formal, phenomenological, and psychological functional as pects (12).

Illness behavior depends on cultural ideas about health and dis ease, so that treat ment and pre ven tion follow log i cally from be liefs about cau sa tion (4). There is usu ally a se quence of events that can be sum ma rized as the stages of ill ness (4). It be gins with the ex pe ri ence of symptoms, followed by asking advice on the experienced symptoms from friends or rel a tives, i.e., "lay refer ral" (4). Then a per son may seek pro fes sional ad vice from a phy si cian, who can con firm that he/she is ill (4). The data collected during the household survey in our study sug gest that the phy si cian's ad vice was the most im por tant source of help for any kind of symp toms and complaints. The most important symptom for phy sician's ad vice was blood in the stool. Self-medication was preferred in case of head ache and the phar ma cist's advice in case of cough ing. None of the re spon dents sought help from folk heal ers. This is prob a bly due to the respon dent bias be cause the in ter view ers were med i cal students, and it is very prob a ble that some amount of ad vice was sought from folk heal ers, par tic u larly for ab dom i nal pain and derma to logical prob lems.

Peo ple who be come ill and who are not helped by self-treatment make choices about whom to con sult in the pop u lar, folk, or pro fes sional sec tors for fur ther help (13). Ill nesses such as colds are treated by rel a tives; supernatural illnesses by sacred folk healers; and natural illnesses by phy si cians – es pe cially if they are very severe (13). Ill peo ple are at the cen ter of such ther a peu tic net works, which are con nected to all three sec tors of the health care sys tem (13). Ad vice and treat ment pass along the links in this net work, be gin ning from ad vice from the fam ily, friends, neigh bors, friends of friends, and then mov ing on to sa cred or sec u lar folk heal ers or phy si cians (13). Com mu nity stud ies show that about three-quarters of peo ple will com plain of some kind of ill health at any time, but only one third of these will be seek ing a phy si-

Table 3. Help-seeking behaviors for various symptoms and complaints (row percentages, N=812)

Symptoms and complaints	Self medication	Physician's advice	Pharmacist's advice	Nothing
Headache	69.8	10.6	5.2	14.4
Dysuria	42.5	37.4	0.0	20.1
Abdominal pain	41.0	13.8	4.5	40.7
High fever	36.6	49.0	6.2	8.2
Cough	34.6	39.0	10.4	16.0
Fatigue	10.9	70.9	0.0	18.2
Dermatologic rash	6.2	62.4	0.0	31.4
Chest pain	6.0	74.8	2.3	16.9
Genitourinary discharge	2.7	69.0	0.0	28.3
Blood in the stool	0.1	94.8	0.0	5.1

Table 4. The reasons for visit to the pharmacies

Reasons	n	%
Prescribed drugs	307	23.1
Unprescribed drugs	537	40.3
Advice for complaints	211	15.9
Others[a]	276	20.7
Total	1331	100.0

[a]Others in clude mea sure ment of blood pres sure, mea sure ment of body weight, in jec tion, fam ily plan ning meth ods, test for preg nancy, cos metic materials.

cian's help. The health care is fre quently ini ti ated with home/self treat ment (4,13,14).

Generally it is accepted that self-medication is of prime importance and the decision to seek treatment elsewhere is taken only in the case of serious illness (15-20).

In our study, visiting a phar ma cist did not seem to be a sig nif i cant mode of help-seeking be hav ior for any of the complaints or symptoms. Pharmacist's advice was used in small percentages for the complaints such as cough, fe ver, and pain ful con di tions. This re sult was also sup ported by the data col lected at the phar ma cies in the sec ond phase of the study.

Most of the attendants to a pharmacy asked for unprescribed drugs, by giv ing the spe cific names of the drugs. The ra tio of self-medication to pre scribed med i-cines can be an in di ca tion of the ex tent in which the pro-fes sional med i cal ser vices are used. In a cross-cultural study in Brit ain, USA, and East ern Eu ro pean Coun tries, similar pat terns of med i cine tak ing were found de spite large dif fer ences in na tional sys tems of pri mary care (4). In a Brit ish sur vey, the use of self-prescribed med i ca tion was twice as com mon as the use of pre scribed med i cines (21). Self-medication was most com monly taken for fe-ver, headache, indigestion, and sore throat (21). Self-medication was of ten used as an al ter na tive to phy-sician's advice, which was reserved for more serious con di tions (21). In the same study, more than a half of the sam ple thought the lo cal phar ma cist was a good source of ad vice for many health con di tions (21). In many other stud ies, the use of pre scribed drugs was more com mon than the pre scribed drugs (22-26).

In our study, cough/sore throat and dermatologic problems made more than a half of reasons for com-plaints to a phar ma cist. A con tra dic tion in help-seeking

Table 5. Major symptoms and complaints as reasons for seeking a phar macist's advice

Symptom and complaint	n	%
Coughing and sore throat	66	31.3
Dermatological problems	53	25.1
Stomach complaints	18	8.5
Headache	16	7.6
Arthralgiae and myalgiae	15	7.1
Diarrhea	8	3.8
Constipation	8	3.8
Chest-pain	2	1.0
Others	15	8.5
Total	211	100.0

Table 6. Unprescribed drugs requested from the pharmacies

Unprescribed drug groups	n	%
Analgesics and antipyretics	157	29.2
Expectorants and antitussives	90	16.7
Antibiotics	34	6.3
Vitamins and minerals	28	5.2
Hormonal preparations	25	4.7
Anthelmintics	24	4.5
Psychopharmacologic preparations	21	3.9
Corticosteroids	20	3.7
Cardiovascular and antihypertensives	20	3.7
Otorhino-ophtalmological preparations	19	3.5
Antiseptic solutions	19	3.5
Antacids and H2 receptor blockers	18	3.4
Anti-migraine preparations	11	2.0
Antihistaminics	10	1.9
Antifungals	8	1.5
Laxatives	8	1.5
Other	25	4.7
Total	537	100.0

behavior of people with dermatological problems was ob served, since none of the re spon dents re ported seek ing a pharmacist's advice for a dermatological problem, whereas 25.1% of the visits to pharmacies for advice were for such rea sons (Ta ble 5). This can be ex plained by the fact that people think dermatological prob lems can be eas ily treated and they try self-medication first. When it fails, as the sec ond step, they seek help from a phar ma-cist still thinking that it is a problem easy to treat. Sharpe's study (27) had sim i lar re sults, show ing that ad-vice was sought from a phar ma cist in cases of skin com-plaints, respiratory tract infections, dental problems, vom it ing, and di ar rhea.

Most com monly re questedunprescribed drugs in our study were an al ge sics, antipyretics and drugs for re spi ra-tory symptoms. In a UK study, the most commonly unprescribed medicines were antipyretics, fol lowed by analgesics, cough medicines, and laxatives (22). In a study in Mex ico, cus tom ers buy ing drugs at 54 phar ma-cies were in ter viewed dur ing peak shop ping hours (28). The most frequently bought products were analgesics, nonsteroidal anti-inflammatory drugs, and vitamins. Self-medication accounted for more than half of the sales.

In a na tional sur vey in Tur key, 21.7% of the sam ple representing Turkishpopulation had a "poor" or "fair" self-perceived health sta tus and a con sid er able per cent of Turk ish peo ple sought a non-physician as the first con-tact per son for med i cal help (6). Among non-physicians, phar ma cists have a prom i nent role with 0.45 con tact rate per person per year (6). Several studies indicate that Turk ish peo ple have a ten dency to use pop u lar and folk sector, and to seek medical help from non-physicians, par tic u larly phar ma cists (29-31). As a re sult of this fact, the an nual phy si cian con tact rate per per son is 2.44 (6), which is very low com pared with the rates in the de vel-oped Eu ro pean coun tries (32).

These stud ies and our present re sults in di cate that a con sid er able amount of the health care oc curs within the

popular sector, where self-medication and pharmacist advice are the dominant modes of help-seeking behavior, especially for painful conditions, respiratory symptoms, and dermatological problems. Pharmacies seem to have a significant role in the treatment of such illnesses. It is obvious that medicines bought for listed problems may have many negative side effects when used in inappropriate dosage and frequency. Several studies recommend improving communication and introducing a referral system between pharmacists and physicians (33-36) such as their joint work on developing a system of giving advice and recommendations for over-the- counter drugs (36). We think that pharmacists must be trained and supervised aboutunprescribed drug usage and that the integration of pharmacy services in curative services on the primary level would have beneficial effect on the public health. A study from Germany emphasizes safety issue in unprescribed drug usage, suggesting that a list of over-the-counter drugs can be increased only after careful animal and human testing (37).

Our study was carried out in an industrialized, urban region in Western Turkey and the findings cannot be generalized to the entire country. Also it would be more useful and scientific to study practices of people by qualitative research methods such as in-depth interviews or focus group discussions. Nevertheless, this study indicates that health professionals should study popular and folk sectors of health care because most of the health care occurs within these sectors.

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