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Statistical Study on Self Medication Pattern in Haryana, India

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ABSTRACT: According to WHO's definition, self medication is "The selection and use of medicines by individuals to treat self-recognized illnesses or symptoms". Self-medication includes the use of nonprescription drugs and a range of different alternative medicines such as herbal remedies, food supplements, and traditional products. In most illness episodes, self-medication is the first option which makes self-medication a common practice worldwide.

People of all socio-demographic categories practice self-medication. The most frequently self-diagnosed illnesses or symptoms of illnesses were: GI illnesses and headache/fever. Of these more than 30% were less than 24 hours duration and nearly 80% less than seven days duration of illness. The reasons given by respondents for self-diagnosis and self-medication were non-seriousness of the illnesses, for emergency use and prior experience about the illness. Whatever the duration of illnesses and reasons for self-diagnosis, nearly 60% requested drugs by mentioning the names of the drugs and more than one-fifth by telling the symptoms of their illnesses. Requests for antimicrobial drugs were very high for all reported illnesses and very low for ORS.

KEYWORDS: Self Medication; WHO; Drugs.

INTRODUCTION

Health, Disease & Drug Use

According to WHO, health is defined as state of complete physical, mental, and social well-being and not merely the absence of diseases or infirmity [1]. As with all human actions, the decisions regarding health behaviour are influenced in part by external stimuli e.g. a pharmacist advising a patient and also by internal states such as those thoughts and feelings and beliefs.

Patients understand their illness within their own conceptual framework, which includes their own beliefs, thoughts and feelings. They process that information and then make their own decision and act. Disease and illness are different. Illness happens to humans i.e. illness is a subjective state of the person who feels aware of not being well. Disease happens to organs i.e. disease is a physiological/psychological dysfunction. Disease/injury is resulting from an unfavourable interaction of agent, host, and environment. Most simply stated, an agent is a factor whose presence (e.g. Tubercle bacilli) or absence (e.g. vitamin B deficiency) causes disease. Host factors refer to those physical and psychological attributes of a person that predisposes or protects from disease (e.g. advanced age,

antibody levels)[2].

This is important to know because pharmacists are talking to patients about the drugs they dispense. The dialogue that occurs between the patient and health care provider often is telling and listening. Unfortunately, there is not a one-to-one correspondence between telling and knowing & knowing and doing. Patients take information and process it with their own cognitive framework, which is based upon their interpretation of their own experiences and henceforth start doing self medication.

Self Care

Self-care behaviour is not new, but rather the oldest and most widely used of all forms of behaviour that affect the health of individuals. However, the use of the term in the health field is new. The contemporary self-care is a response of developments and attitudes regarding the role of individuals that occurred over the past hundred years or so [Betsy S., et al]. The rapid changes in the organization, content and delivery of formal health services also suggest another reason for maintaining the term self-care and developing associated theory and concepts. In the future, even more information will become available to help the consumer in matters concerning self-care and self-medication medicines[3].

Self Care Concepts

Self care has been defined as substitute, supplementary or additive to professional care, or as a discrete component in the health care delivery system. As there are many authors and professions concerned with health and self-care, there are also different definitions to self-care. However, all definitions agree on the main components/concepts of self-care: diagnosis, self-medication, self-treatment and/or patient participation in professional care[4]. Self-care is active; it is participatory rather than passive receiving of care or directives given by professionals.

Self Medication

Self-medication is the treatment of common health problems with medicines specially designed and labeled for use without medical supervision and approved as safe and effective for such use.

Medicines for self-medication are often called 'nonprescription' or 'over the counter' (OTC) and are available without a doctor's prescription through pharmacies. In some countries OTC products are also available in supermarkets and other outlets. Medicines that require a doctor's prescription are called prescription products (Rx products). [5] **India does not have a list of OTC products.**

In 1995 the WHO Expert Committee on National Drug policies stated: “Self-medications is widely practiced in both developed and developing countries. Medications may be approved as being safe for self-medication by the national drug regulatory authority. Such medicines are normally used for the prevention or treatment of minor ailments or symptoms, which do not justify medical consultation. In some chronic or recurring illnesses, after initial diagnosis and prescription, self-medication is possible with the doctor retaining an advisory role.” [6].

Products consumed during self-medication

There exists similarities in the ailments that are treatable with self-medication across European countries; however, there are significant differences in the share that self-medication products have of the total pharmaceutical market. These range from 26.1% in Switzerland a system, which encourages self-medication down to 7.8% of the total market in Sweden. In the large pharmaceutical market of the UK, 20.7% and Germany, 17.7% of the total pharmaceutical market is accounted for by self-medication products. The proportion of unprescribed to prescribed drugs was 1:1.75 with analgesics, antipyretics, expectorant and antitussives as the most commonly requested ones[7].

Importance of Self Medication

Consumers are willing and able to take more responsibility for their own health and by so doing a significant amount of resources could

be utilized in more pressing areas than patients receiving consultation and prescription for minor ailments.

Consumer behaviour research has shown that people want to take responsible self-medication, know what illness they could treat themselves, use medicine with caution and when to seek professional help[6].

Haryana, India

Haryana emerged as a separate State in the federal galaxy of the Indian Republic on November 1, 1966. With just 1.37% of the total geographical area and less than 2% of India's population, Haryana has carved a place of distinction for itself during the past three decades.The population of Haryana, according to the 2001 census, is 21,144,000, with 11,364,000 males and 9,781,000 females. The population density is 477 people/km^2. Haryana, along with neighboring Punjab, has a skewed sex ratio at 861, with many more men than women. Selective abortion of female fetuses has a very high provenance, reflecting a widespread preference for the male child.

Major ethnic group in Haryana is of Jat people and Yaduvanshi Ahirs. Other ethnic groups included the Kambojs, Gujjars , Agarwals , Rors , Brahmins , Rajputs, Hindu Rayeen, Khateeks, Pasi, Meena, Meo, Dalit, Shorgir, Punjabis and Sainis. [8]

Legal Issues in Self Medication

As per drug laws applicable to India, Self Medication is permitted for OTC drugs but in India there is no specific list of OTC drugs. The list of OTC drugs is obtained through exclusion method means, the drugs which are not in Schedule H or G is OTC. These medicines can be procured without the prescription of Registered Medical Practitioner and mainly used as self medication. There are no "Pharmacist only" medicines. Moreover the situation is more complex as a number of prescription only medicines are used in self medication and easily available through pharmacies with any prescription.

MATERIALS & METHODS

Study Area: The study area will be Haryana state of India. included both rural and urban areas of Haryana. The study facilities was community pharmacies and by directly approaching to patient and care taker/attendant. The data was collected from each district of Haryana and covered urban and rural, literate and illiterate population belonging to every community. This ensured the homogeneity of sample. The sample population consists of income of different level and having different life styles.

Study Design: The data for this study was collected by the survey method in community pharmacies and by directly approaching the patient and care giver/ attendant. The structured research instrument was an interview schedule, which sought information on demographic background and self-medication practices. The interview schedule was used to interview persons who have just come to the community pharmacies for self-medication during the study period for their own use or as messengers for others. The study followed a multi-stage stratified sampling of drug retail outlets (by level, area and ownership) and drug consumers (by the different decisions made). The study was conducted from May 2009 to June 2010, at community pharmacies found in Haryana. There were two major groups of drug consumers (patients with prescription and those without prescription) going to these data collection sites, community pharmacies. Drug consumers purchase drugs with prescription are excluded from the study. The other group consisted came to purchase drugs without prescriptions (self-medication) during the study period were the targets of the study. Drug consumers coming without prescriptions are again subdivided into two; actual drug consumers and messengers. Actual drug consumers are drug consumers who come to the community pharmacy for self-medication for his/her own ailment. Drug consumers messengers are drug consumers who come to purchase drugs not for themselves but for others.

Inclusion and exclusion criteria: As the study is about public at large and person involved in health profession like, medicine, pharmacy, nursing, veterinary and paramedical are excluded from the study as they have different level of knowledge of drugs and hence different pattern of self medication can be found in these professionals which will affect the results in overall, hence excluded from the study.

Inclusion criteria:

1. Inhabitant of study area i.e. Haryana, India
2. Of sound mind
3. Can communicate by at least one of the means viz. speaking or writing
4. Consuming any category of medicine without any prescription at time of study

Exclusion Criteria:

1. Inhabitant outside the study area.
2. Of insane mind.
3. Unable to communicate
4. A registered medical practicioner
5. Pharmacist
6. Nurse
7. Any Paramedic
8. Any other person working in health care sector at any level.
9. Drug consumers, taking medicines with valid prescription.

Study Instrument: Questionnaire form was divided into following two parts:

I. Socio-demographic characteristics of the respondent

II. Prospective self-medication

Pre-testing of the questionnaires and orientation to data collectors

The questionnaire was prepared and pre-tested in selected community pharmacies, which are similar to actual data collection sites but not included in the study. Data collectors and investigator did the pre-testing. Then important feedbacks obtained from the pre-testing were incorporated to make the final form of the questionnaire. In addition, orientations of the data collectors were given at the site of data collection. Every data collector was followed either face to face or through telephone by investigator to clarify doubts and standardize the data collection.

Data collection and analysis

As mentioned above, this study used structured interview questionnaire as data collection instrument and was administered /filled by oriented data collectors. For the whole study, there were fifteen data collects. All data collectors were Pharmacy professionals. All the data collectors had been given the orientation about the overall idea of the project and particularly, how to approach and request the respondents to be interviewed. The objective of the study, confidentiality of the research and other ethical considerations mentioned in the interview guideline were explained for every interviewee. After explaining these, every respondent was asked for his or her willingness to participate in the study. This process helped in the standardization and uniformity of the data collection. Any doubts and queries by the data collectors were communicated through telephone or face to face by either the supervisor and/or investigator.

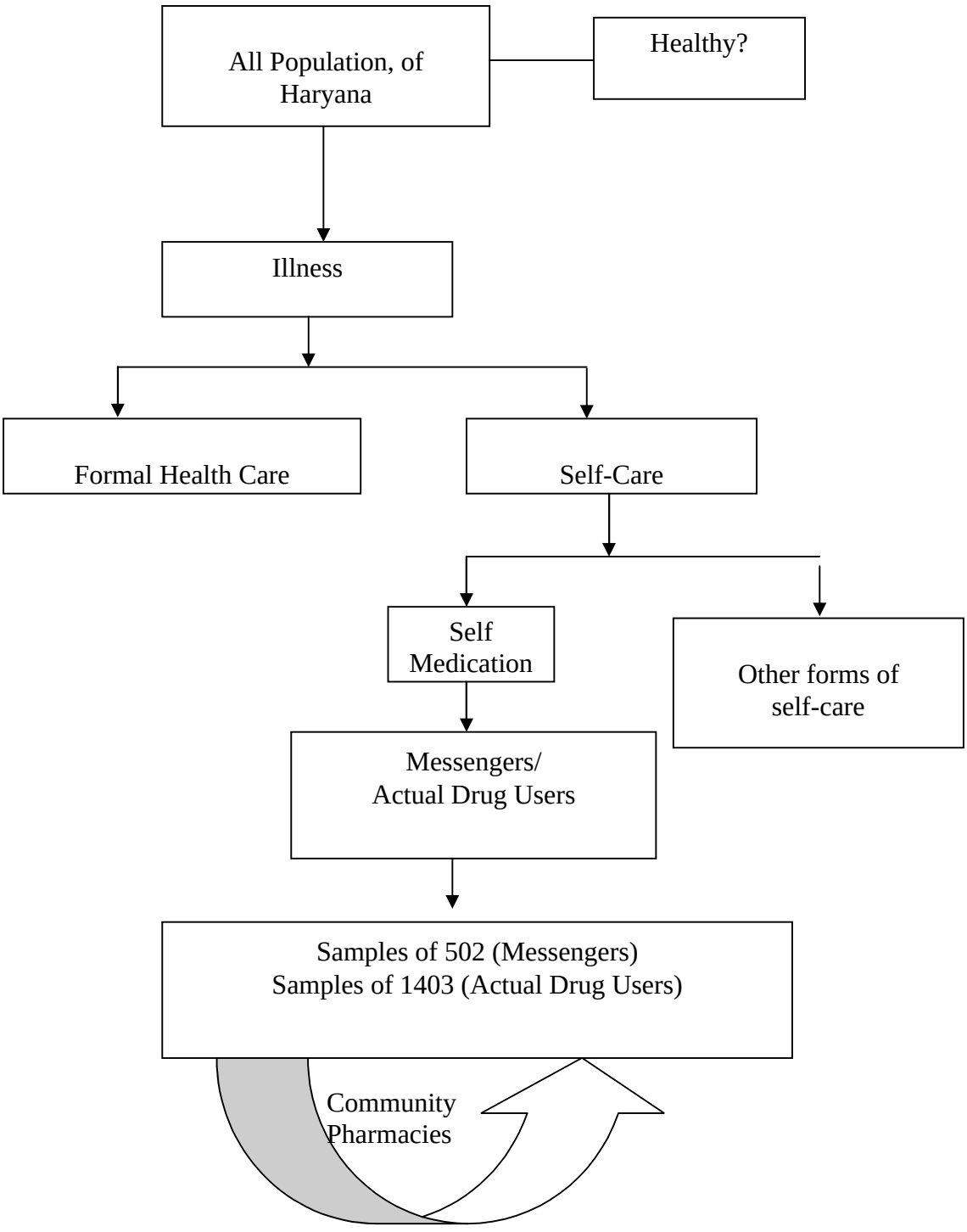

Figure 1: Research Methodology

Data were collected in the sampled community pharmacies and from the sampled population over six months duration using a structured and pre-tested questionnaire. Data collectors were extensively supervised. Particularly, the first few questionnaires at each study community pharmacy were used to closely follow and provide immediate feedback and make adjustments by the data collectors.

After the data were collected, inspected/cleaned, coded and entered by the investigator, it was entered into EPI Info Version 3.5.3 programmed for this purpose. The responses to the open ended questions were grouped and coded and analysis made accordingly.

Information was generated based on the information required by the investigator and envisaged and planned ahead of time.

RESULTS & DISCUSSION

Samples and sampling

There were approximate 8000 formally licensed community Pharmacies in Haryana. A total of 60 community pharmacies were included in this study of which all were privately owned. A total of 2000 questionnaires were distributed of the total distributed questionnaires, 1403 (70.15%) for actual drug users and 502 (25.1%) for messengers were filled and collected while 95, 4.75% i.e.,55 from questionnaire Form Actual drug user and 40 From messengers were found to be incomplete and/or excluded from the data entry upon cleaning. Hence the total return rate was 95.25%.

A. Socio-demographic characteristics

1. Age and gender

Upon categorization of respondents into actual drug users and messengers, age category showed that 3.6% of the actual drug users and 4.4% of the messengers were 12 years of age and below, and 17.9% of the actual drug users and 3.0% of the messengers were above 65 years of age; and the mean age for actual drug users was 33.9 years and for messengers 25.9 years (with mean difference of 8 years, messengers being younger; and minimum age of 8 and maximum age of 86 years old), and 78.5% of the actual drug users and 92.6% of the messengers were between the ages of 12-65 years. The proportion of the interviewee as regards sex was a 35.6% female and 64.4% male and 35.8% female and 64.2% male respectively for Actual drug user and messengers. The results are presented on Table 1 below.

Table 1 (a): Socio-demographic characteristic of respondents - age

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Less than 12	50	3.6	22	4.4
12 to 65	1102	78.5	465	92.6
Greater than 65	251	17.9	15	3
Mean Age	33.9		25.9	
Total	1403	100	502	100

Table 1 (b): Socio-demographic characteristic of respondents - gender

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Female	500	35.6	180	35.8
Male	903	64.4	322	64.2
Total	1403	100	502	100

Table 1 (c): Socio-demographic characteristic of respondents - Marital Status

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Single	442	31.5	206	41.0
Married	946	67.4	292	58.2

Divorced	0	0.0	0	0.0
Widowed	15	1.1	4	0.8
Separated	0	0.0	0	0.0
Total	1403	100	502	100

Table 1 (d): Socio-demographic characteristic of respondents - Family Status

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Father	490	34.9	82	16.3
Mother	356	25.4	50	10.0
Son/Daughter	300	21.4	250	49.8
Other Member of the family	70	5.0	36	7.2
Other Include	187	13.3	84	16.7
Total	1403	100	502	100

Table 1 (e): Socio-demographic characteristic of respondents - Educational Level

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Illiterate	410	29.2	74	14.7
Read and Write	210	15.0	44	8.8
Primary Schools	190	13.5	111	22.1
Secondary Schools	393	28.0	172	34.3
College and Above	200	14.3	101	20.1
Total	1403	100	502	100

Table 1 (f): Socio-demographic characteristic of respondents - Occupation

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Student	302	21.5	204	40.6
Government employee	256	18.2	82	16.3
Self employee	300	21.4	99	19.7
Employed by private business	207	14.8	70	13.9
Unemployed	344	24.5	47	9.4
Total	1403	100	502	100

Table 1 (g): Socio-demographic characteristic of respondents - Average Monthly Family Income

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Less than 4500 Rs	296	21.1	129	25.7
4500 to 10000 Rs.	804	57.3	299	59.6
10000 to 25000 Rs.	203	14.5	34	6.8
More than 25000 Rs.	100	7.1	40	8.0
Total	1403	100	502	100

Table 1 (h): Socio-demographic characteristic of respondents - Average Drug Expense in last 6 months

Characteristics	Actual Drug User (n=1403)	
	Frequency	Percentage (%)
Less than 50 Rs.	556	39.6
50 to 150 Rs.	281	20.0
150 to 250 Rs.	256	18.2
More than 250 Rs.	310	22.1
Total	1403	100.0

Table 1 (i): Socio-demographic characteristic of respondents - Religion

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Hindu	1250	89.1	421	83.9
Muslim	51	3.6	41	8.1
Sikh	76	5.4	35	7
Christian	10	0.8	0	0
Others	16	1.1	5	1
Total	1403	100	502	100

Table 1 (j): Socio-demographic characteristic of respondents - Condition for the drug consumer

Characteristics	Actual Drug User (n=1403)		Messengers (n=502)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Pregnant	21	1.5	0	0
Breast Feeding	32	2.3	0	0
Has Chronic diseases	300	21.5	140	27.9
Under 12 years of age	55	3.9	20	4
Over 65 years	192	13.8	42	8.4
Other	903	57.2	300	59.7
Total	1403	100	502	100

2 Educational level and occupation

Further analysis of the respondents based on the their educational level showed that 29.2% of the actual drug users and 14.7% of the messengers were illiterate, and 28.5% of actual drug users and 30.9% of messengers either read and write, or had primary level education and 42.3% and 54.4% were found to have secondary level, and college and above level of education, respectively (Table 1). Analysis of interviewee also showed that 21.5% of the actual drug users and 40.6% of the messengers were students, and 54.4% of the actual drug users and 49.9% of the messengers were either government employees, employees of private business or self-employed. But the rest, 24.5% of actual drug users and 9.5% of the messengers were unemployed (Table 1 f).

3 Marital and family status

Of the total of the actual drug users, 31.5% and of the messengers, 41.0% were single/unmarried and 67.4% and 58.2% were married, respectively. The rest were divorced, widowed or separated (Table 1 c).

Studying the respondents by their status in the family showed that 34.9% were fathers and 25.4% mothers for actual drug users and 16.3% fathers and 10.0% mothers for messengers. That is more than 50% of actual drug users and 30% of the messengers were either fathers or mothers (Table 1 d).

4 Average income and drug expenditure

Average income of respondents was: 10725 Rs. per month for actual drug users and 10065 Rs. for messengers. Average drug expenditure for actual drug users was 261 Rs. and for messengers 251Rs. over the last six months (Table 1 (g and h).

B. Self-medication practices

1. Self-diagnosis and illnesses

Actual drug user respondents were asked to mention illnesses or symptoms of illnesses that prompted them for that self-medication. Accordingly, the frequently reported illnesses were, 20.2% GI, 23.6% headache/fever, 20.2% respiratory, 3.3% skin, 6.7% eye, 2.5% STDs, and all other illnesses 10.% (Table 2). Concerning the duration of the reported illnesses; 33.0% were illnesses of less than 24 hours duration, 45.0% 1-7 days duration, 8.0% 1-4 weeks duration and 14.0% 5 or more week duration (Table 3).

Table 2 Frequently Reported Illnesses by Actual Drug Consumers

Illness/Symptom of illness	Frequency	Percentage (%)
RTI	284	20.2
GI	333	23.7
STD	35	2.5
EYE Disease	94	6.7
Headache/fever	331	23.6
Skin Disease	186	13.3
Other	140	10.0
Total	1403	100

Table 3: Response of Interviewee on the Duration of Illnesses Prior to self-medication

Duration of Illness	Frequency	Percentage (%)
< 24 hr	629	33%
1-7 days	857	45%
1-4 weeks	152	8%
5-12 weeks	38	2%

> 12 Weeks	229	12%
Total (ADU + Messengers)	1905	100%

Respondents were investigated on why they resort to self-diagnosis and self-medication? They provided reasons as follows: 35.9% of the respondents believed that the disease was not serious; 12.5% of them believed that it was an emergency care; 15.7% of the respondents have had prior experience to the illness and/or the drug; 21.6% of the respondents were of the opinion that it is less expensive in terms of time and money; 7.1% assumed prevention of known or unknown illness/symptoms of illnesses (Table 4).

2. Types of requests for self-medication

Following the reasons for self-medication, interviewee were asked or observed on the types of drug requests. That is, how do drug consumers request drugs from the community pharmacies for self-medication? Accordingly, 37.5% of the drug consumers requested drugs by mentioning the specific name of the drug or drug product, which can be generic or brand.

Interestingly, there are some familiar names of brand drug products that dominate over others, and 12.7% of the respondents requested drugs by mentioning the category of the drug to which it belongs. 12.3 percent of the drug consumers told their symptoms to the person on the other side of the counter, which can either be a pharmacist/pharmacy professional or nonprofessional (Table 5). These categories of drug consumers/patients lend themselves to the care of the "pharmacist" in the community pharmacy. It is at this time that the pharmacy professionals have to demonstrate their abilities and expertise of drugs and their role as drug use educators and counsellors. The rest, 14.1% were requesting drugs by showing an old sample or package of the drug product by presenting a piece of paper and by describing the physical characteristics such as the colour and/or shape of the drug product (Table 5).

Table 4: Reasons for Self-diagnosis and Self-medication by the Actual Drug Consumers

Reasons for Self-diagnosis and Self-medication	Frequency	Percentage (%)
Emergency use	176	12.5
Disease is not serious	503	35.9
For prevention of diseases	99	7.1
Prior experience about the drug	220	15.7
Less expensive in term of time and money	303	21.6
Others	102	7.3
Total	1403	100

Table 5: Types of Requests for Self-medication of Actual Drug Consumers

Self-medication of Actual Drug Consumers	Frequency	Percentage (%)
Maintaining the name of the drug	526	37.5
Maintaining the category of the drug	178	12.7
Telling symptoms of the illness	299	21.3
Showing an old sample of the drug	198	14.1
Presenting piece of paper	55	3.9
Describing physical characteristics of the drug	112	8.0
Others	35	2.5
Total	1403	100

3. Drugs requested

The next assessment made on actual drug consumers was, the category of drugs requested. Accordingly, the most frequently requested category of drugs were 24.8% analgesics/ antipyretics, 14.0% antimicrobials, 17.0% GI drugs, 5.4% respiratory drugs and 4.9% vitamins and ORS (Table 6). Further assessment of knowledge of the respondents on specific drug request showed that more than 90% of the respondents knew the name and usage of the drugs requested.

Table 6: Frequently requested category of drugs for self-medication- ADU

Requested Category of Drugs	Frequency	Percentage (%)
Antimicrobial	196	14.0
Analgesic/antipyretic	348	24.8
Respiratory drug	76	5.4
GI drug	238	17.0
Vitamins	19	1.4
ORS	49	3.5
Told symptoms only	222	15.8
Others	255	18.2
Total	1403	100

4. Source of advice/information

Drug consumers were asked as to their source of advice/information for self-medication. The results revealed that 39.0% obtained advice of the health care providers such as physicians, nurses and health assistants but without formal prescription.

But 24.0% of the drug consumers were advised by friends, relatives or neighbours, etc who have no health background. The third (15.0%) sources of advice were recommendations of the pharmacist or those working in the pharmacy and the fourth around 14.0% of them received no advice but had information on the drug before or read label, leaflet or promotional materials (Table 7).

Table 7: Sources of Advice for Self-medication for Actual Drug Consumers

Sources of Advice for Self-medication	Percentage (%)	Frequency
Received no information	14%	196
Read information Material	5%	70
Advice by friends, family and neighbors	24%	337
Suggested by traditional healers	1%	14
Advice by doctors, nurses and other health workers without prescription	39%	547
Recommended by pharmacists and those working in the pharmacy	15%	210
All others	2%	28
Total	100	1403

Interviewees were asked as to whether they have had other sources of care before the current self-medication. Accordingly, 51.1% have had care from public health facility or private facility prior to self medication (Table 8).

To study concomitant drug use, respondents were asked whether they were taking other drugs at that particular time. It was found that 28.2% were taking other drugs than requested for self-medication at that time, prescribed or self-medicated of which 37.4% were drugs being taken prior to self-medication. They were also asked to mention the name of the drugs, if they could recall. It was found that all ranges of drugs were consumed.

Table 8: Sources of care before the current self-medication of the actual drug consumers

Sources of care	Frequency	Percentage (%)
Public health facility	363	25.9
Private	353	25.2
Self-meditation	294	21.0
Magic Remedies	82	5.8
Traditional Medical Practitioners	230	16.4
Other Sources of care	82	5.8
Total	1403	100

Another way to show the extent or frequency of self-medication was to ask how many times the respondents visited a community pharmacy to purchase drugs for her/himself or for others over six months period. Around 8% had visited a community pharmacy more than five times, and around 41% between two and five times over a six months period (Table 9). Respondents were asked whether they had self-medication and as to the outcome of that treatment. 62.7% of them said that they were cured, 17.1% claimed improved situation and 10.9% said they were neither cured nor their situation improved (Table 10). Interviewees were requested to freely comment about self-medication. The open responses were coded as follows: 21.1% of respondents perceived that self-medication was not good; 37.1% of them believed that self-medication should be for non-serious, known or chronic illnesses; 16.1% said that self-medication is useful only after consulting health care providers of any category; and 10.6% of them said that they chose self-medication because it saves their time and money (Table 11).

Table 9: Frequency of Visit by Actual Drug Consumers of Community Pharmacies over Six Months Period

Frequency of Visit	Frequency	Percentage (%)
Once	295	21%
Twice	267	19%
Thrice	224	16%
Four Times	84	6%
Five Times	112	8%
More than five times	421	30%
Total	1403	100%

Table 10: Outcomes of prior self-medication of actual drug consumers

Outcome of previous self-medication	Frequency	Percentage (%)
Cured	880	62.7
Improved	240	17.1

Has not cured not improved	153	10.9
Other responses	130	9.3
Total	1403	100

Table 11: Actual drug consumer comments about self-medication

Comments on self Medication	Frequency	Percentage (%)
Is not good	402	21.1
Only after consulting health care providers	306	16.1
Only for non-serious, known and chronic diseases	707	37.1
Only for anti-pains	202	10.6
Saves times and money	201	10.6
Others	87	4.6
Total (Messengers and actual drug users)	1905	100

In the present study, 2.5% of the respondents were seeking self-medication of which 40.1% were antimicrobials for STDs. In reality, the common pathogens of STDs are multi-drug resistant as reported for Haryana. One of the health education messages given in STDS control is patients' adopting appropriate health seeking behaviour, including reporting to health care facilities. Self-medication for the STDs will further worsen the disease of that particular patient and increase the drug resistant pattern of organisms. Some respondents having STDs were asked why they resorted to self-medication instead of going to health care facility such as a hospital and health centres. They responded that they don't want to show their disease. This seems simple but it indicates that the drug consumers have a confidence on and closer relationship to pharmacy professionals working in the community pharmacies. Thus, this opportunity of having the confidence of the client on the professionals is a critical success factor to teach drug consumers on the appropriate use of drugs and maintain that relationship, even without loosing the benefit that the pharmacist expects to get. There are studies showing trustworthiness of the pharmacist in other countries [9]. Self-medication is often cited as a factor fostering drug resistant pathogens but is only one factor. Over prescription and genetic transfer of information between pathogenic species affects rate of resistance as well[10].

Of the total respondents that reported headache/fever 12.6%**,** respiratory 27.3% and GI disorders 23.5% were requesting antimicrobials for self-medication. But these groups of illnesses or symptoms of illnesses are usually amenable to simple home remedy and some OTC drugs. Other studies indicated that among the lowest income group there was up to 47% of self-medication; and that 46% of all the drugs used for self-medication were antibiotics [11]. However, RTI usually are viral in origin subsiding spontaneously without antimicrobials. This requires close follow-up and symptomatic treatment. And antimicrobials are indicated if concomitant circumstances arise and in specific clinical situations.

When antibiotics are used correctly, they are among the most important drugs. When they are overused or inappropriately used, however, they contribute to a troublesome, increasingly worrisome problem in patient care: the development of antimicrobial resistant pathogens [12]. On the one hand, the high number of requests of antimicrobial drugs by the respondents for self-medication is beyond justification. On the other, despite the frequent occurrence of childhood diarrhoea, 21.1% for Haryana (44.5% at national level) and manageability of this illness at home, the number of requests for ORS was insignificant, only 3.5% of the requests.

As regards, the type of drug requests of drug consumers, 37.5% of them do request drugs by their name, sometimes by brand name of the drug. This indicates that the drug consumer has made up his/her mind leaving no room for discussion on diagnosis and choice of drug for that particular illness by the health care provider. Much effort is required to advise/counsel as 14.1% of the

respondents/drug consumers requested drugs by showing an old sample or package or piece of paper.

The rest of the drug consumers are those who request the advice of the dispenser and also test the expertise of the person on the other side of the counter of his ability to diagnose minor illnesses and select appropriate drugs. It is here that the professionals should capitalize to show their expertise and potential. It should be noted that a drug consumer who comes to the community pharmacy with a piece of paper on which the name of the drug is written is not formal prescription. The prescriber was not also known. Any person who knows the names of drugs or any support staff working in health facilities might have provided such "prescriptions" as tested by fieldwork.

The most frequently requested category of drugs in this study were analgesics/antipyretics and antimicrobials. Similar consumption by value pattern was observed by another study [13]. The perceived severity of a disorder seemed to influence the choice of therapy. Analgesics were extremely popular for non-severe respiratory disorders, often taken three times daily for several days in succession, seemed to regard analgesics as having curative properties. There is not any argument against the use of analgesics/antipyretics on self-medication provided they are given with proper advice and not taken as treatment continuously as evidenced by other studies [14].

During an illness episode, individuals commonly seek information and advice from a referral networks and this affects self-diagnosis and treatment by providing reference points for perceptions of illnesses, by contributing knowledge gained through experience and by sharing of medications.

In the present study, friends, relatives, neighbors were indicated as sources of advice /information for self-medication, which amounted to 24% was high although similar pattern was observed in other studies [13]. However, one-fifth of the respondents claimed, they depend on information obtained from labels, leaflets and drug promotional materials. So balanced, objective and understandable drug information on those materials to assist drug consumers in their choice and compliance of drugs is important. Consumer product information offers a form of standard information, which will be the same whether it is obtained from a general practitioner, specialist or a pharmacist.

Nearly 37.4% of the total respondents had practiced one form of self-care of which 28.2% were self-medication before they came for the current self-medication. As regards, concomitant drug use, 28.2% of respondents were taking drugs prescribed and/or self-medication at the same time while they were coming for that particular self-medication. Of the total respondents who took drugs, 37.4% were drugs on self-medication. There is a danger of drug-drug interactions unless they are asked during dispensing whether they are taking other drug(s) and the necessary adjustments are made. The drugs that were taken and remembered by patients and told to the interviewer made a long list of drugs, which may potentially interact with the currently requested category of drugs. The more drugs a consumer takes alone or with other drugs the greater likelihood that an adverse reaction will occur.

CONCLUSION

The developed countries promote self-medication assuming the types of minor illnesses that are amenable to self-medication are some how known and the range of products to be consumed are delimited. However, as shown by this study, self-medication is widely practiced in the study site, Haryana. The type of illnesses/symptoms of illnesses reported and the category of drugs requested for self-medication are very extensive and not limited to minor illnesses and OTC products for India, respectively. People of all socio-demographic categories practice self-medication.

The most frequently self-diagnosed illnesses or symptoms of illnesses were: GI illnesses and headache/fever. Of these more than 30% were less than 24 hours duration and nearly 80% less than seven days duration of illness. The reasons given by respondents for self-diagnosis and self-medication were non-seriousness of the illnesses, for emergency use and prior experience about the illness.

Whatever the duration of illnesses and reasons for self-diagnosis, nearly 60% requested drugs by mentioning the names of the drugs and more than one-fifth by telling the symptoms of their illnesses. Requests for antimicrobial drugs were very high for all reported illnesses and very low for ORS.

There is no doubt about the role or contribution of self-medication to the health service. Nevertheless, self-medication has to be within the scope or has to have limits as to the kind of illnesses to be self-diagnosed and treated, and the type of drug products that can be consumed. Consumers knowledge of drugs were also not adequate. In addition to this, even if self-medication is within its scope, it has to be accompanied with appropriate counselling and objective and complete drug information by the health care provider, particularly, the pharmacist.

RECOMMENDATIONS

Particular attention and specific advice/counselling should be provided during self-medication for all drug consumers, particularly, to drug consumers such as pregnant and breast-feeding women, children, elderly and the chronically ill drug consumers.

The pharmacy professionals have to live up to the standards in the provision of health/drug use education and counselling, particularly to self-medicating drug consumers who mainly rely on the information provided by professionals in the community pharmacy. They should use or demonstrate their expertise on drugs; they have to show their potential as competent health care providers, they have to meet the expectations of the public. The verbal and written language and information should be tailored to the needs of the particular dug consumer including symbolic labelling for illiterate consumers. Health care providers have to advice or counsel about the drugs dispensed irrespective of the level of knowledge of the client.

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