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Assessment of Public Knowledge, Attitude and Practice on Medicine Use in Kabirpur of Sonipat City, Haryana, India

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ABSTRACT

The objective of this study was to assessment the public knowledge, attitude and practice of medicine use in Sonipat city India. A cross-sectional study was conducted using a set of household interview questionnaire. 7% of respondents visited multiple facilities on the same day for the same aliment and 23% failed to go for follow up to the same facility.25% did not accept non-drug therapy and 92% preferred prescription of three or more medicines per visit. 9% did not inform the prescriber or dispenser about currently using medicine and 52% did not asked the side effect of medicines. A total of 60% were unaware that most medicines have side effects and 74% stopped taking their medicines when symptoms disappeared; 77% did not realize that the injections are riskiest dosage form, 13% had definite color and taste preferences;34% practiced self medication and 27% never consulted the dispenser; 21% choose medicines based on previous experience and 29% exchanged medicineswith others; 2% stored all their medicines in refrigerator and 24% did not check the expiry date; 64% threw unused medicines away; 28% kept them for future use and 8% returned them to a pharmacy or health facility. There is a widespread lack of knowledge about the appropriate use of medicines in Sonipat city. Certain attitude and beliefs can contribute to health risks and unnecessary expenditure. Most of the result can be improved by a well- targeted public education campaign.

Keywords: Attitude, Health knowledge, Household, Medicine, Practice.

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INTRODUCTION

World Health Organization (WHO) held a conference on Rational Use of Drugs in Nairobi intended to the means and methods of ensuring the rational use of drugs[1]. Some factors behind inappropriate prescriptions like poor consulting period of doctors (average 54 seconds only); short dispensing time (avg. 23 seconds only) and patients' misunderstanding about medicine dosage (only 55% patient can understand correctly)[2]. Irrational prescribing both from developed and developing countries consisting of polypharmacy, use of drugs that are not related to the diagnosis, unnecessary use of antibiotics, irrational self-medication, or drugs taken in insufficient quantities[3]. Self-medication usually leads to inadequate drug utilization patterns[4]. Self-medication and health seeking behaviour pattern varies among different populations and are influenced by many factors like age, gender, education, family, society, law, availability of drugs, exposure to advertisements and nature of illness[5]. Essential medicines, a cornerstone of rational use of medicines (RUM), are defined as those that satisfy the health care needs of majority of the population. This concept was defined in 1975 by World Health Organization[6]. Since 1996; the Delhi Society for Promotion of Rational Use of Drugs (DSPRUD) was working for promoting Rational Use of Drugs (RUD). Worldwide more than 50% of all the medicines are prescribed, dispensed and sold inappropriately in which 50% of patients failed to take them correctly[7]. The selection of essential medicines needs to be followed by appropriate use and improvement of the quality of health care. The Rational Use of Medicines (RUM) is defined as "Patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time and at affordable prices[8]. There was a 3M concept in Rational Use of Medicines (RUM); Medicines Means Money. RUM means less profit and income for those dealing with medicines, prescribers and sellers[9]. World Health Organization (WHO) manual "Guide to Good Prescribing: A Practical Manual is a useful publication for people[10]. World Health Organization (WHO) has developed recommendations for twelve core national policies and structure needed to promote rational use of medicines (RUM)[11]. The directorate of rational use of medicines(DRUM) conducted a baseline public knowledge, attitude and practice (KAP) study towards rational use of medicines and information about the proper use of medicines by the public and also highlighting some unsound medicines use behaviour and inappropriate benefits and practises[12]. Public education has received very little attention and has often not been allocated the necessary human and financial resource[13]. A KAP survey gathers information about what respondents know about rational use of medicines

(RUM), what they think about the health system response to RUM, and what they actually do with regard to seeking care or taking other action related to RUM.[14,15,16,17,18]. A very few studies have documented KAP on medicines use problems in the community in Oman and other Gulf countries[12, 19]. Therefore, research studies on medicine use in the community should be conducted as a priority and used in development and implementation of community-based regional and national interventions to improve the appropriate use of medicines by population. However, despite irrational use of medicines in the community is enormous, promoting rational use of medicines by public is often forgotten and the most neglected target for all of the rational use of medicines efforts. The study in this field received little attention and rarely published or fully documented and as a result, experience gained cannot be shared or build on. These may be due to logistics, language or literacy and other problems. The guideline provided by WHO help the researcher, administrators of health programmes and health worker with simple research methods to identify problems in the provision and use of drugs at the community level of health care. In today's situation in India like country, where there is a wide difference in availability of medicines amongst villages and cities, rational use of medicines is imperative. The aim of this study was to assess the knowledge, attitude and practice towards medicines use in order to identify the common problem in community. The result should provide the focus for an effective public education campaign to improve medicine use and increase public awareness about certain irrational practices.

MATERIALS AND METHODS

Background

Kabirpur is a ward number 20 in Sonipat city Haryana, India. This research study was conducted to evaluate the common problems of medicine use in community of Sonipat city to improve the appropriate use of medicines.

Sampling

For baseline data collection 500 families interviewed, including the respondents of either gender and permanent resident of the city who were willing to participate.

Data Collection

The data collection method was a structured interview of household. For collecting data, Kabirpur (ward no.20) households in Sonipat city were decided to cover. The study design was a baseline cross sectional study based on the methods enclosed in World Health Organization manual: How to investigate the use of medicines by consumer. The written interview

questionnaire in a predefined order for the interview is the tool used for this study.

Methodology

One member from each household was interviewed, generally the parents or other member of family with minimum aged 15 years old. Respondents were free to accept or refuge to participate at any time. A household surveyed was not done if the 'house informant' or appropriate substitute was absent. Therefore, some data collection was done in the second or third visit in case when the family to be visited or the person to be interviewed was not present at home during the earlier visit. Also when a household notable to participate in survey; the next household was chosen as a replacement. A total of 500 households were involved in the survey. The answer of the interview and the observation were recorded instantly into the questionnaire forms. Respondents were assured of confidentiality and informed that only cumulative data would be reported. The questionnaire, composed entirely of closed question, covered the following aspects:-

- The socio-demographic data of surveyed households (including respondent's sex, age, education and profession).
- The households' visit to health facility and their drug therapy
- Communication between patient and health provider
- Patients' concordance with treatment and perception
- Self-medication
- Storage and disposal of medicine

Data Processing and Analysis

The collected data analyzed and interpreted by percentage.

Ethical Considerations

Ethical approval of the study was approved by municipal council Sonipat and Department of Pharmaceutical Sciences Maharshi Dayanand University Rohtak, Haryana, India under the guidance of Dr. Neeraj Gilhotra Associate Professor of Pharmacology at MDU Rohtak before implementation of the survey. A consent form was signed by the respondents and all the collected data have been used only for the purpose of this research study.

RESULTS AND DISCUSSIONS

The current study had planned to identify the common problems of medicine use in Sonipat city to improve the appropriate use of medicines. The interpretation of the study results was generals in relation to different environmental and characters of the studied households. The overall

results of the studied households about respondent's sex, age, education, profession,knowledge, attitude, and practice towards use of medicines is the main important part of this survey.Public knowledge and attitude help in find out their characteristics of visits and drug therapy, communication between patient and healthcare provider, patient concordance with treatment and perceptions, self-medication and storage and disposal of medicines.

Socio-Demographic character of interviewed households

Five hundred households were interviewed in urban community Kabirpur in Sonipat city. The majority of respondents were female (59.4%) than male (40.6%). Details of certain socio-demographic parameter of the households were illustrated in the table 1 and figures 1,2,3 and 4 respectively.

Table 1: Socio-Demographic Parameter of the Households

Characteristics	Parameter	Percentage
Location	Kabirpur	
Community	Urban	100
Respondents	Male	40.6
	Female	59.4
Respondents person	Father	25.4
	Mother	53.2
	Other	21.4
Respondents' age	15-30	39.4
	30-40	27.2
	40-50	20.0
	50-60	8.2
	>60	5.2
Education level of respondents	Illiterate	24.8
	General education	63.2
	University	7.6
Respondents Profession	Service	19.0
	Labor	10.4
	Student	10.8
	Housewife	54.6
	Farmer	9.2
	Businessman	2.0

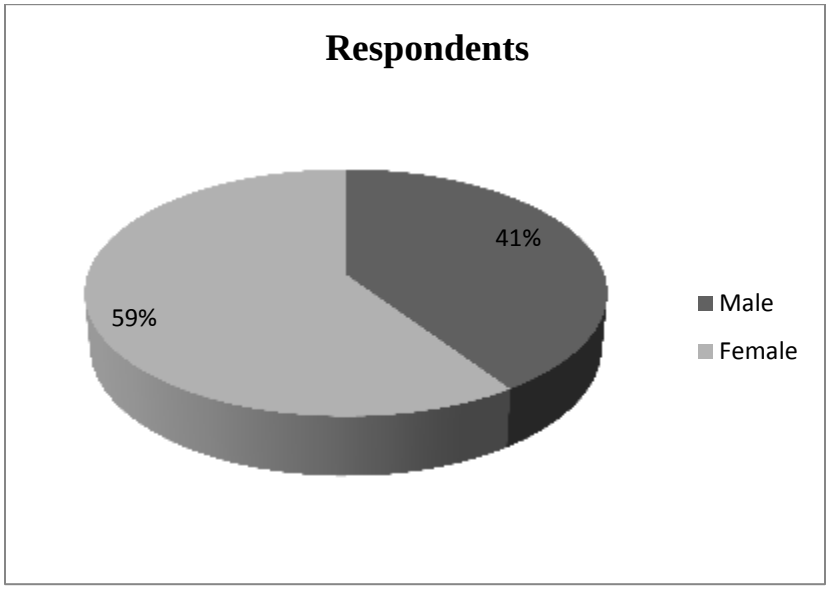

Figure 1: Respondents Interviewed in Households

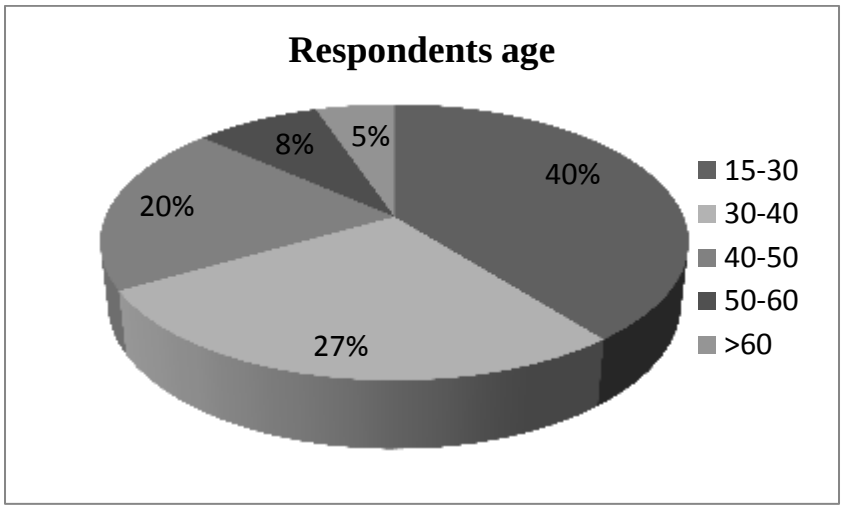

Figure 2: Respondent age of Interviewed Households

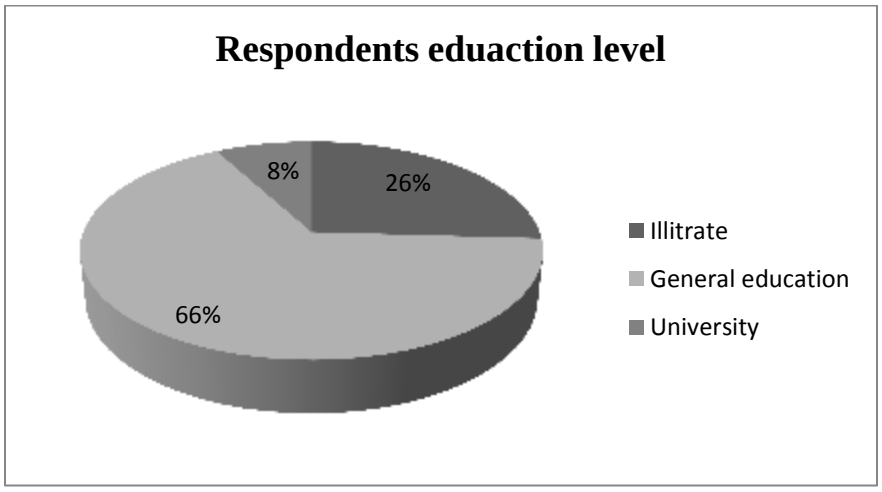

Figure 3: Respondents education level

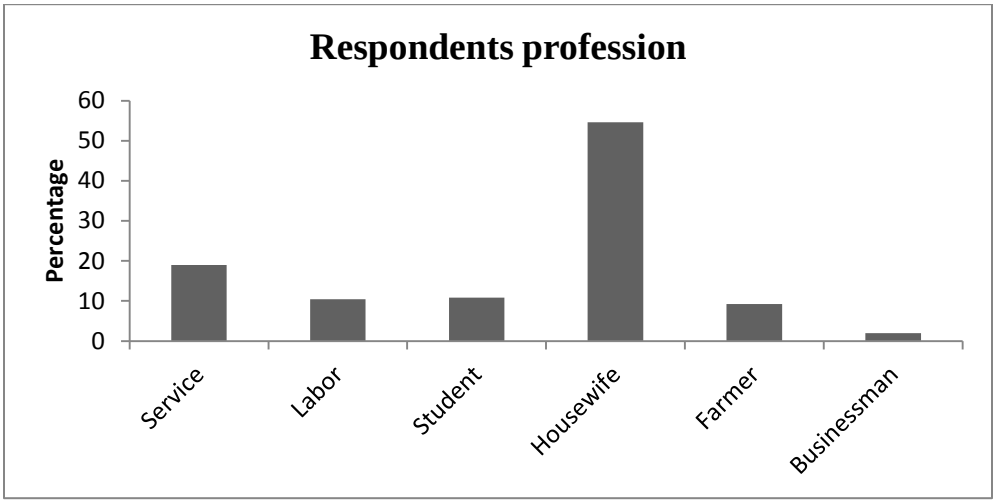

Figure 4: Respondents profession that participating in this study

Survey of public knowledge, attitude and practice towards use of medicines

About 7% respondents visited more than one health facility on the same day for the treatment of the same ailment. About one forth (23%) said that they did not return for follow-up to the same health facility if they did not feel better within the time they expected. 25% stated that they would not accept it if only advice and assurance were given and if no medicines were prescribed for them. Just over one third (34%) respondents mentioned that they practiced self-medication, while 73% of respondents consulted and sought help from dispenser in choosing the appropriate treatment. One fifth (21%) said they chose their medication on the basis of previous experience, i.e. a trial and error process. Less than one third (29%) admitted to sharing or exchanging medicineswith other.2% of respondents stored all medicines in the fridge, 30% in medicine box, 40% on shelf, 12% drawer, 9% in bag and 9% on other places at homes. About one forth (24%) admitted to using medicines without checking expiry dates. More than one forth 28% kept left-over medicines for future use themselves or others, but small number 8% reported that they return the unused medicines to a pharmacy or health facility was illustrated in the table 2.

Table 2: Results of survey of public knowledge, attitude and practice towards use of medicines

Identified attitude and behaviour		
In households	**Parameter**	**% of total respondents**
Characteristics of visits and drug therapy	Visit more than one health facility on the same date	7
	Don’t return to same health facility for follow up	23
	Don’t accept non drug therapy	25
	Prefer 3 or more drug per consultation	92

Communication between patient &health provider	Don't inform the providers about the medicines they are using	9
	Don't ask the providers how to take the medicines	1
	Don't ask the providers when to take the medicines	1
	Don't ask the provider about the side effect of prescribing drug	52
	Don't ask the providers about the economic drug	93
	Don't ask the provider where to store their medicines at home	85
Patient concordance with treatment and perceptions	Discontinue treatment when they feel better or symptoms disappear	74
	Don't know that medicines have side effects	60
	Don't know that injection are the riskiest dosage form	77
	Prefer to take their medicines by injection	15
	Influenced by the color or taste of the medicines	13
Self medication	Practice self-medication	34
	Don't consult dispenser when practicing self-medication	27
	Choose medicines according to previous experience	21
	Exchange medicines with others	29
Storage & disposal	Store all their medicines in fridge	2
	Use the medication without checking its expiry dates	24
	Throw out left-over medicines	64
	Keep any left-over medicines for future use	28
	Return left-over medicines to pharmacy	8

Patients Visits to Health Facilities and Drug Therapy

Although patients have the right to seek treatment anywhere they choose, they are not encouraged to more than one health facility for the treatment of same illness on the same day. They should preferably return to the same health facility if there is no improvement in their symptoms within a time agreed with the doctor. Patients should not believe in 'a pill for every ill' and should accept non medicine therapy when only advice and assurance are decided on by the provider and not insist poly pharmacy.

Patients-Health Provider Communication

The interaction between the patient and the health provider (prescriber and dispenser) is clearly

critical to health care delivery and the proper use and understanding of medicines. Training in communication skills frequently receives low priority in the medical curricula and in some health training institutions it is not covered at all. Health care provider should ask appropriate question and give patients the information they need in a language they understand and the patient should also be encouraged to communicate properly. Patients should tell the prescriber about any conventional and traditional medicines they are using currently, and ask about the possible side effect and how and when to take the prescribed medicines, i.e. before or after food. Finally they should know where to store them in home.

Patient Adherence and Perceptions

About third forth (73%) respondents in household discontinue treatment when they feel better or symptoms disappear. They should continue their treatment as instructed by the health provider even if they feel better or symptoms disappear. Most of respondents surveyed don't know that all medicines have side effect and injection are the riskiest dosage form and that the color or taste of a medicines is largely irrelevant to the action of the medicines. Therefore, patients should ask about the side effects and not insisted on having injection. They should leave the health provider to choose the appropriate dosage form and not refuse a medicine of different color or taste than what they have taken before. When people experience side effect such as nausea, vomiting or dizziness, it is usually thought to be a worsening of illness. They are many examples in the news and literature where patients are apparently not using medicines in the way intended by the health provider based on the amount and nature of unused medicine gathered. Some studies have shown low level of adherence to medical regimen[21, 22, 12].

Practicing Self-Medication

More than 1/3respondents(34%) used self medication and exchange between family members. In certain country, self medication can be a problem; about 80% of all medicines are purchased by individual for themselves or for family member without a prescription. In a pilot study with small sample size interviewed at a local health centre, 65% of the respondents used non prescription drug, while a community study in Thailand described the overuse of analgesic in rural community[23, 24]. In households survey conducted in different countries purchase of drug based on self, advice of friends and relative and used medicines, including herbal remedies without a medical consulation and re-use of stored medicines and exchange of drug between family member[12, 25, 26,22].

Storage, Expiry Date and Disposal of Medicines

Medicines storage is very important as heat, moisture, light and dirt can harm medicines, making

them unsuitable for use. Therefore, patient should asked the health provider where and how to stored their medicines at home and should follow the storage instructions. 2% of the respondent stored all medicines in fridge. People should know that only few and specific medicines need to be stored in a refrigerator in order to maintain their quality and efficacy, whereas other medicines may be spoiled and lose their activity when stored in refrigerator. In general medicines which are not stored properly may lose their action and become toxic even before their expiry date. It is also important that medicines should be stored out of the reach of children to avoid any accidental poisoning. Medicines should always be kept out of the reach of children. Expiry date is the period extended from the date of the manufacture to the date on which the medicines should not be used by the patient or consumer. The expiry date of medicines is valid if the medicines stored at proper condition. Medicines which transferred from original package or opened for use and particularly eye preparation and solution formed by reconstitution of powders will have expiry date shorter than the stamped one. It is very important to check the expiry date when receiving and before using any medicines. A total of 37% of Saudi patients interviewed indicated that they never checked the expiry date of a medication prior to consumption[12]. In two surveys of UK households, 51% of medicines in households were not in current use and of these, 40% were expired[27, 28]. Medication wastage is defined as any drug product either dispensed by a prescription or purchased over-the-counter that is never fully consumed. It is important factor that contributes to escalating health care cost[29, 30]. Many respondents do not know what to do with any medicine that remainsunused. The availability of unused medicines in the home may constitute a source of materials for irrational use and accidently poisoning. In majority cases, any unused medicines should not kept future use. Households should ask dispenser how to deal with medicines present at home. The most common method of disposal of unwanted medicines in current study was to discard in the waste bin (45%), which is 70% of current study. Only 12% of the respondent returned them to a pharmacy which is almost similar to the result found in this study[13]. Therefore guideline on safe disposal of unwanted medicines are required and an organizing methods of collecting unused medication needs to be introduced.

CONCLUSIONS

The results of this study suggest lack of knowledge and information about the proper use of medicines by families as well as some medicines use behavior and inappropriate practices, attitude and beliefs have been revealed which contributes wastage of sources and environmental hazardous. This evidence makes the need to promote rational use of medicines in community

more compelling. The patient's own practice in using medicines is an important part of the quality use of medicines, as well as the prescribing habits and patient care practices by health workers. Healthcare providers play an important role in RUM activities, so healthcare providers improve their communication skills and give information very well in local language to consumers they can understand. Family's knowledge about their medicines can be improved by good communication between health care providers and consumers or through education of RUM activities.The educational activities should be focused on consumers, whose medicines use patterns are in most need of change, taking into account the cultural and social context in which the beliefs and practices have developed. World Health Organization (WHO) has published resource materials for educating the consumers on the rational use of medicine.

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