

# Self-Medication Patterns and Drug Use Behavior in Housewives Belonging to the Middle Income Group in a City in Northern India

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## ABSTRACT

**Objectives:** The objective was to assess the self-medication patterns and drug use behavior in housewives belonging to the middle income group in a city of Haryana State in Northern India. **Materials and Methods:** A detailed questionnaire designed to assess the self-medication patterns and drug use behavior and interview technique was used to elicit the requisite information. One hundred housewives of the middle income group were interviewed in Rohtak. **Results:** Most of the housewives were in the habit of keeping the medicines though only 73% of them were in the habit of using it without any prescription. Also it was seen that those housewives who were taking self-medication were better educated than those not indulged in self-medication. All of them were using allopathic drugs on a regular basis while other modes of medications were less used. The self-medication was most commonly based on the previous prescriptions issued by the doctors followed by the suggestions from friends, advertisement on the television, and newspapers. For most of them the reasons for self-medication were financial restraints and lack of time to go to the medical practitioner. **Conclusions:** The study delineates the difference in the self-medication patterns and drug use behavior in housewives in a city of Northern India. The results emphasize the need for comprehensive measures for intervention strategies to promote rational drug therapy by improving prescribing patterns and influencing self-medication.

**Keywords:** Drug use behavior, housewives, rational therapy, self-medication

## Introduction

Self-medication is defined as the consumption of medicinal products with the purpose of treating diseases or symptoms, or even promoting health, without a prescription provided by a medical professional.<sup>(1,2)</sup> The prevalence of the practice of self-medication depends on many factors like nature of the disease, educational qualification of the person, nonavailability of the specialized person (during traveling or such conditions), etc. In one study it was seen that 87% of the chest

symptomatics initiated medication on their own for getting relief and this percentage was significantly more in urban people (93.9%) compared to rural subjects (80.6%).<sup>(3)</sup> In another survey conducted in Hong Kong, 97% of the patients practiced self-medication to a variable extent.<sup>(4)</sup> Self-medication was found to be significantly low in breast-feeding mothers (3.2%).<sup>(5)</sup>

Inappropriate self-medication results in irrational use of drugs, wastage of resources, increased resistance of pathogens, entails serious health hazards such as adverse reactions and prolonged suffering.<sup>(6)</sup> If action is not taken, the danger of drug interactions and side effects could increase. Safety in self-medication depends on four factors – drug itself (inherent properties of the drug, dose and its duration), formulation, information available with all purchases, and patient compliance.<sup>(7)</sup>

A number of reasons could be enumerated for the rise of self-medication. One of the reasons being the increase in

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chronic diseases and their incidence has raised from 30% to 80% in the last 40 years.<sup>(6,8)</sup> Other reasons which are responsible for self-medication in developing countries are urge of self-care, feeling of sympathy toward family members in sickness, lack of health services, poverty, ignorance, misbeliefs, extensive advertisement, use of drugs from informal sectors such as open markets and quacks, illegal purveyors of drugs (nonlicensed sellers in the market), etc.<sup>(6,8)</sup>

Some authors are of the view that self-medication can be practiced and they consider it appropriate for short-term relief of symptoms where accurate diagnosis is unnecessary, uncomplicated cases of some chronic and recurrent disease (medical diagnosis having been made and advice given).<sup>(7)</sup> However, people should be properly educated about the practice of self-medication in order to prevent the harmful effects caused by the practice. The increasing self-medication will require more and better education of both the public and health professionals to avoid the complications arising from this practice.<sup>(9,10)</sup>

There has not yet been any systematic research conducted to assess the prevalence of self-medication in the community. Thus self-medication in modern pharmaceuticals seems to be a field in which information is scarce.<sup>(8)</sup>

To the best of our knowledge there is no research conducted to reveal the extent of this problem in Haryana. Therefore we believe that this research may show the magnitude of problem in Haryana so as to initiate intervention by the concerned authorities and the community as well.

## Material and Methods

### Study area

The study site is one of the major cities in northern India, i.e., Rohtak. The population of Rohtak has good access to health facilities. There is one Health University, one Civil Hospital, many dispensaries, more than 100 pharmacy shops, traditional healers, private and other nongovernmental organizations (NGO) clinics.

### Study design and population

This survey included 100 randomly selected houses in the city. Hundred housewives irrespective of their age were included in the study.

### Data collection and management

A structured and pretested questionnaire was used to collect the information. The pretest was done on 10 households which were excluded from the study. It was prepared in English and then translated to local language. The houses were selected by systemic random sampling and every fifth house was taken for the data collection. The collected variables included sociodemographic

data, economical condition of the house, questions on self-medication such as which medicines were kept in the house, any specific place for keeping the medications, whether they were kept in a classified manner or not, how often self-medication was practiced, cautions taken during self-administration of the drugs, and use of other type of medications other than Allopathy. Data were collected from the lady of the house and one housewife was selected for interviewing from each house. Five trained candidates, post-MBBS residents, were trained to collect the data which were authenticated by the investigators. The questionnaire is given in Appendix 1.

### Data analysis and interpretation

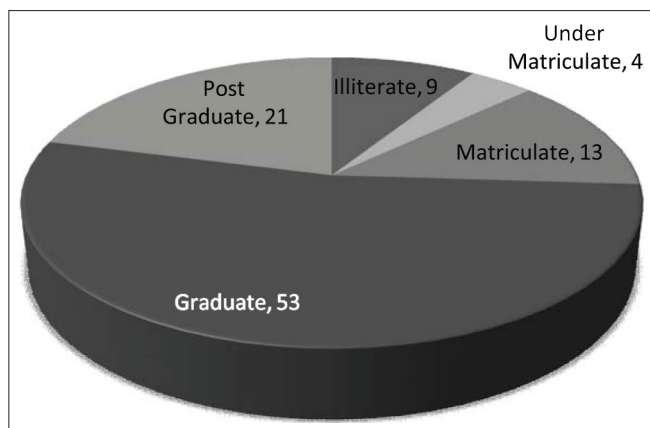
Data were entered into the computer with Statistical package for social sciences (SPSS) software and were analyzed using this software. Results are represented in the form of percentages and figures.

## Results

A total of 132 houses were surveyed, out of which proformas were filled by 100 housewives. Ninety-seven percent were found to be having drugs in their house but only 73% practiced self-medication. Education levels of the housewives were as follows: Illiterate – 9%, under matriculate – 4%, matriculate – 13%, graduate – 53% and postgraduate – 21% as shown in Figure 1. All used the allopathic system of medicine; the other systems used were homeopathic – 27%, and ayurvedic – 21%. The self-medication was based on previous prescription – 49%, advertisement on newspaper and television – 26%, friends – 17%, and others – 8%. The medicines used for self-medication were analgesics – 81%, antacids – 44%, antibiotics – 33%, nutritional supplements – 23%, cough syrups – 16%, antispasmodics – 14%, topical applications – 34%, others – 28% as shown in Figure 2. Only 80% housewives were in the habit of checking the expiry date before self-medication. The correct indications of the stored drugs were known to 28% and partial indications to 53%. However 19% of them had wrong impression about the indication of the stored drugs. The instructions by the physicians regarding dose, frequency, and duration of treatment were strictly adhered to by 41% housewives. Only 49% were aware of the fact that the drugs can cause adverse effects if taken without medical advice. Only 44% used proper measures for liquid preparations. Seventy-one percent of the housewives were of the opinion that self-medication is not justified but felt that it had to be continued because of temporal or financial constraints.

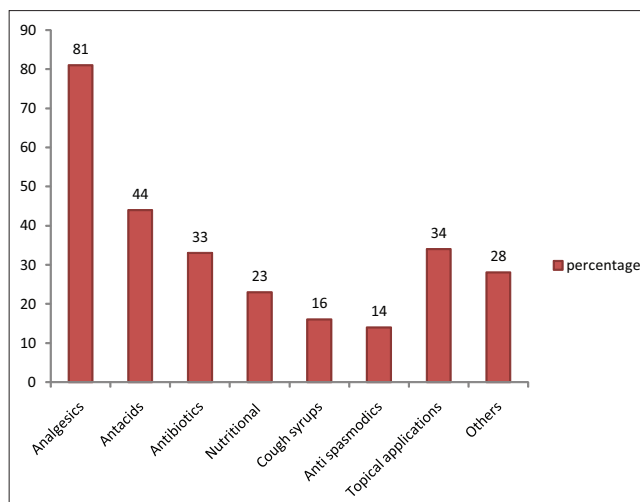
## Discussion

Self-medication is a significant problem in relation to the rational use of drugs and unwanted adverse effects caused by the drugs. The prevalence of self-medication



**Figure 1:** Education levels of the housewives following the practice of self-medication

in this study was found to be 73% compared to that of 27.6% in a study done in Jimma Town,<sup>(11)</sup> 30% in a study done in Mexico,<sup>(10)</sup> and 97% in a study conducted in Hong Kong.<sup>(4)</sup> One of the studies conducted in the Portuguese people showed this prevalence to be 26.3%.<sup>(12)</sup> It was also found that prevalence of self-medication was found to be higher in well-educated patients compared to the illiterate or people with low education. One of the studies published by an Indonesian journal also highlighted the fact that education level is the dominant factor for the practice of self-medication.<sup>(13)</sup> A majority of the patients practiced self-medication based on their previous prescription. Another reason for this wide practice was advertisements on the television. In addition to this, friends also constituted 17% of the proportion who guided this irrational practice. In China the most common reason for self-medication was found to be that people thought they know much to take care of themselves.<sup>(11)</sup> In our study, we found that 71% of the subjects practiced self-medication because they felt that going for repeated consultations to doctor put financial restraint on their budget and rest of them felt that they did not have sufficient time to consult the doctor. So, they consulted the physician only when the condition of the patient was serious enough or was not relieved by the self-medication. In one of the studies the patient's own knowledge and suggestions from family and friends contributed the same percentage (40%) while the salesman influenced the decision in 20% of the patients.<sup>(4)</sup> Comparing the results of this study with the various studies done, it was found that the results are not in accordance with the various studies being done. The most commonly used medication in this study was found to be analgesics followed by antacids, antibiotics, nutritional supplements, cough syrups, and antispasmodic. Topical applications still form an important area in the practice of self-medication. The commonest conditions that led to self-medication in the study done by worku, *et al.* were headache, fever, cough, and diarrhea.<sup>(11)</sup> Similar results were also seen in the studies done in Brazil and France. In one of the studies conducted



**Figure 2:** Common medications used in the practice of self-medication

in the Hong Kong the reasons for self-medication included the conditions like musculoskeletal pain, minor burns or bruises, gastrointestinal upset, headache, sore throat, skin problems, cough, and dyspepsia.<sup>(4)</sup> In one of the studies conducted in the Portugal it was found that the major preparations used for self-medication included throat preparations, cough and cold preparations, antibiotics and corticosteroids for local oral treatments, laxatives, analgesics, dermatological preparations, vitamins, mineral supplements, and other alimentary tract products.<sup>(12)</sup> In addition to allopathy, this study showed that 27% of the patients practiced homeopathy and 21% of the patients favored herbal drugs. In a study done by Hilary and his colleagues, it was found that the most commonly used complementary and alternative modalities in 2002 were herbal therapy (18.6%) followed by relaxation techniques (14.2%) and chiropractic (7.4%).<sup>(14)</sup> Herbal medicines were the most frequently used medicines (51.8%) amongst the Nigerian people.<sup>(15)</sup> One of the studies showed that 25% of the people used herbal drugs and 12.5% of the patients of the people practiced homeopathy.<sup>(16)</sup> Also it was seen in this study that a large number of people were not aware of the potential damaging nature of the different medications self-administered by them. Similar results were shown in the study done by Cindy *et al.* It was quoted in that study: "There is an alarming deficiency in the patients' knowledge of the possible side-effects of self-medication; they should therefore be warned about the danger."<sup>(4)</sup>

However some authors consider that self-medication is appropriate.<sup>(7)</sup> Also World Health Organization is nowadays promoting the self-medication for trivial diseases to save the time and resource wasted in treating the minor diseases.<sup>(8)</sup> In this study along with studying the self-medication patterns and drug use behavior in housewives, some guidelines were also given for the proper use of medicines and their storage and these guidelines are provided as Appendix 2.

## Conclusion

This study shows that self-medication is quite prevalent among the housewives belonging to the middle income group and that most of them are educated too. A majority of housewives are not aware of the fact that adverse effects can occur if medication is taken without doctor's advice and it is necessary to check the expiry date of medicine. So more and better education of both the public and health professionals is required to avoid complications arising from this practice.

## Contribution of the authors

All authors contributed in the collection and interpretation of data.

## Limitations of the study

This study has been conducted on a small group of people, but provides the useful information regarding the self-medication patterns in the community belonging to the middle income group. Further studies need to be conducted to elaborate and confirm these findings.

## Appendix 1

### Questionnaire

Drug survey report – trend of self-medication by housewives

Name W/O:

Profession Apparent income group: Low/middle/high

Address

Education levels Co-operation granted: Yes/No

- Do you keep medications in your house?
- Do you have a different place for keeping medications? Where?
- Is your medicine closet out of reach for children?
- Do you keep medications in a classified manner, e.g., pain relievers, antidiarrheals?
- Do you use any medications without medical advice?
- What is the motivation/information source for self-medication?
- What are the cautions you observe regarding self-medication?
- Have you got knowledge regarding the patient information leaflet?
- Have you got knowledge regarding prescribing information, e.g., dose, duration of treatment, interaction with food or other drugs?
- Do you use any other type of medicines other than allopathic medicines?
- How do you decide the dose, frequency, and duration of the drug use undertaken by you?
- Do you check the expiry date on drug preparations used by you?
- Do you feel that self-medication is not justified and you should not take it?
- Are you aware of the adverse effects of drugs used without doctor's advice?
- Which measures do you use for liquid preparations?

## Appendix 2

### Guidelines

- Keep all drugs in a cool, dry place in air tight containers protected from heat and light. Try to keep the drug in a classified manner.
- Oral suspensions and pediatrics drops should be kept in a refrigerator (avoid freezing).
- Keep all drugs and poisonous chemicals out of reach of the children.
- Do not keep drugs by bedside, on dressing table, study table,

- and other open places.
- Discard all outdated and unlabeled preparations.
- Do not store too many drugs.
- Do not take drugs without medical advice.
- Consult your doctor before changing dosing regimen.
- Report immediately any unpleasant effect of drug experienced.
- Do not take drugs of different systems of medicine simultaneously.
- Prescribing information should be sought preferably from doctor or by own from the patient information leaflet.
- Use proper measures for children, e.g., standard volume measures for liquid preparations.
- Alcohol should not be consumed along with drugs as it can cause serious reactions.

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