ISSN: 2278-4853 Vol. 12, Issue 1, January 2023 SJIF 2022 = 8.179 A peer reviewed journal

ASSESSMENT OF SELF MEDICATION PRACTICE AND PUBLIC PERSPECTIVES TOWARD ROLE OF COMMUNITY PHARMACY PROFESSIONALS IN URBAN AREA OF DEHRADUN

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DOI: 10.5958/2278-4853.2023.00012.5

ABSTRACT

Self-medication is a burning global issue today. Self- medication can be defined as the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms. [1] Globally almost everyone practices self-medication in view of self-care of health. Families, friends, neighbors, the pharmacist, previous prescribed drug, or suggestions from an advertisement in newspapers or popular magazines are common sources of self-medications. [2].

KEYWORDS: Self-medication, World Health Organization, sympathy, population, symptom.

INTRODUCTION

Self-medication has a positive impact on individuals and health care systems if practiced correctly. It allows patients to take responsibility, build confidence to manage their own health, and save time spent in waiting for a doctor, and it may help to decrease health care costs. Nevertheless, self-medication practice is highly prone to inappropriate use and has its own drawbacks resulting in wastage of resources, increased resistance of pathogens, and increased adverse reaction. Self-medication practices can also lead to incorrect self-diagnosis, delays in seeking appropriate care, dangerous drug interactions, incorrect dosage, incorrect choice of medication, and risk of dependence and drug abuse. [6]

Today there is an enormous growth in self-medication in India. Some of the possible factors are the urge to self- care, feeling of sympathy toward family members in sickness, lack of health

Asian Journal of Multidimensional Research ISSN: 2278-4853 Vol. 12, Issue 1, January 2023 SJIF 2022 = 8.179 A peer reviewed journal

services, poverty, ignorance, misbelieves, and extensive advertisement of drugs and availability of drugs in establishments other than pharmacies.[7] In a developing country like India, a large percentage of population, when they fall sick, do not consult the physician for economic reasons. They either consult a drug store (retail pharmacy) and obtain medicine from the shelf, or consult a neighbor who may be having some tablets left over from his/her previous illness.[8, 9]

At times, there is a possibility of nothing untoward happening upon following such advice, but it can still be quite dangerous. Over the counter (OTC) drugs are being used as form of self-medication. The buyer diagnoses OTC products provide symptomatic relief for conditions his/her own illness and buys a specific drug to treat it. OTC products provide symptomatic relief for conditions that do not always require medical intervention. [10, 11]

On the other hand, some governments are increasingly encouraging self-care of minor illnesses, including self- medication. World Health Organization (WHO) promotes the practice of self-medication without medical consultations for effective and quick relief of symptoms to reduce the burden on health-care service centers, which are often understaffed and inaccessible in rural and remote hilly and tribal areas. [12] Responsible self-medication help to reduce the cost of treatment, travelling time as well as doctor's time i.e., consultation time. [13]

However, there is a lot of public and professional concern about the irrational use of drugs. Although OTC drugs are meant for self-medication and are of proven efficacy and safety, their improper use due to lack of knowledge about their side effects and interactions could have serious implications, especially in extremes ages (children and old ages) and during special physiological conditions like pregnancy and lactation. There is always risk of unknown interactions between active ingredients present in OTC drugs and prescription medicines as well as increased risk of worsening of existing disease pathology. [14]

Major problems related to self-medication are wastage of resources, increased resistance of pathogens and health hazards such as adverse reaction and prolonged suffering. Antimicrobial resistance is a current problem world-wide particularly in developing countries where antibiotics are available without any prescription. [15]

The increased advertising of pharmaceuticals poses a larger threat of self-medication to the younger population in general. This raises concerns of incorrect self-diagnosis, drug interaction, and use of drugs other than for the original indication. [16]

The increase in the quantities and varieties of pharmaceuticals worldwide eases the accessibility of medicine by consumers, thereby giving options for its misuse. [17]

All India Institute of Medical Sciences, New Delhi observed that self-medication was considerably high among undergraduate medical and paramedical students in India and it increased with medical knowledge. [18]

Illness or symptoms of an illness are a common human experience. People respond to illness in diverse modalities. The modalities that are finally chosen and adopted depend both on cultural and socio-economical factors and in the perception of the illness. [19, 20]

Several benefits have been linked to appropriate self-medication, among them: increased access to medication and relief for the patient, the active role of the patient in his or her own health care, better use of physicians and pharmacists' skills and reduced cost of treatment for minor health conditions. However, potential risks of inappropriate self-medication practices include: incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse. [21]

The prevalence of self- medication practices is alarmingly high in health-care students, despite knowing the consequences and potential risks. The reasons for self-medication practice among health care professionals are easy availability of drugs, professional exposure to drugs and knowledge of treatment of the diseases. Another reason for non-prescription drugs amongst youth is the exposure to media and advertisements. Survey of self-medication among student population is important because this population represents a segment of highly-educated members of the society that have better access to healthcare-related information. Of particular significance is research on self-medication among the population of medical students, because they are the future generation that will have the right to prescribe drugs and to work on healthcare education. Additionally, their attitudes towards pharmacotherapy could affect the way they will prescribe medication in the future. Therefore, the purpose of our study was to access the self-medication practices among Health care professional students in a tertiary care hospital. [22]

REVIEW OF LITERATURE

Self-medication is a burning global issue today. Self- medication can be defined as the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms. [1] Globally almost everyone practices self-medication in view of self-care of health. Families, friends, neighbors, the pharmacist, previous prescribed drug, or suggestions from an advertisement in newspapers or popular magazines are common sources of self-medications. [2]

Self-medication (SM) is one part of self-care which is known to contribute to primary health care. If practiced appropriately, it has major benefits for the consumers such as self-reliance and decreased expense. However, inappropriate practice can have potential dangers such as incorrect self-diagnosis, dangerous drug-drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease, and/or risk of dependence and abuse. [24]

Community pharmacists in the rural/remote areas are usually turned to for advice in the treatment of minor illnesses, and make appropriate recommendations, including referral to hospitals. Abuse of medicine has been a bane and major constraint in ensuring safe and effective

Asian Journal of Multidimensional Research ISSN: 2278-4853 Vol. 12, Issue 1, January 2023 SJIF 2022 = 8.179 A peer reviewed journal

use of essential medicines. Self-medication is the self-care initiative of obtaining and consuming drugs without medical advice either for diagnosis, prescription or surveillance of treatment. Prevalence of drug abuse has been associated with self-medication of drugs obtained over the counter, consumption of left-over medicines, sharing medicines with relatives or friends or using left-over medicine stored at residential places. [25].

WORLDWIDE SCENARIO OF SELF-MEDICATION

The concept of self-medication encourages an individual to look after minor illnesses with simple and effective remedies which has been adopted worldwide. People hold the view that the medicine should be used in the event of any sickness or discomfort or easiness. In the United Kingdom, where on the average 50% of health care takes place within the realm of self-medication itself. [41]

India: There was a study carried out in Barabanki in the state of Uttar Pradesh with an aim of studying practices of self-medication in rural areas. It was observed that the practice of self-medication was considerably high among uneducated people as compared to those who were educated. It was also noted that the use of allopathic system of medicine was much higher in the Barabanki area as compared to traditional once. Recurring used drugs of self-medication were mostly paracetamol, analgesics, antimicrobials, cold remedies and GIT drugs. The information obtained by the respondents was from sources like previous prescriptions, neighbours, relatives, chemists and advertisements. Respondents practiced self-medication because it was time saving, cost saver as they did not prefer to visit doctors for minor illness because of high consultation fees and also it was very time consuming. [42].

Middle East Countries: Many incidences of self-medications have been reported in the Middle East countries. Selfmedication was mainly seen in the therapeutic class of antibiotic drugs.

Brazil: Self-Medication was seen in a rise in adolescents and especially in girls as per certain studies undertaken in Brazil with reference to the Birth Cohort Study of 1993 in Pelotas. This increase in self-medication among the female population could be attributed to the use of analgesics and contraceptives due to menarche.

African Countries: Among female graduate and undergraduate students in universities of South Nigeria, self-medication was done for menstrual symptoms. Ampicillin, Tetracycline, Ciprofloxacin, Metronidazole were the antibiotic drugs which were commonly used for treating menstrual symptoms.

Mongolia: Self-Medication was carried out for children in urban communities of Mongolia mainly for the symptoms of nasal discharge, fever, sore throat, cough; and Amoxicillin was the most preferred antibiotic for the treatment.

Malaysia: In the country of Malaysia there was a research study conducted regarding attitude and awareness about self-medication among urban population.

ISSN: 2278-4853

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Self-Medication in Over the Counter and Prescription Drugs:

Drugs that are legally allowed to be sold without any consent of registered medical practitioner's prescription are known as Over the Counter (OTC drugs). As OTC drugs can be procured without any prescription they are easily accessible and contribute majorly in self-medication. Habitual OTC drugs that are easily available are painkillers, cold and flu, anti-allergy medicine, vitamins and energy tonics. The most common reasons of self- medications were found to be fever, cold & cough and headache. World Health Organization considers self medication as a part of the self care that helps efficient use of the troubled healthcare awareness system. Enlarging the list of OTC drugs and increasing availability of controlled drugs gives the people freedom of choosing the type of treatment they want to undergo. In spite of being useful in treating common ailments, surplus use of OTC drug can lead to undesired effects and reactions. Strict measures are needed to monitor advertisements of medicines both in print and electronic media.

Trend of "Rx-to-Over-the-Counter Switch"

The transfer of prescription ("Rx") medicines to non-prescriptions or OTC status is known as the "Rx-to-OTC switch". Many new medicines are first introduced as prescription medicines. After a sufficient time has passed in the use of the medicine by many patients and large-scale experience and scientific information has been gathered, for suitable conditions a manufacturer may elect to submit an application to the appropriate authority for the medicine to be given OTC status.

REASONS OF SELF-MEDICATION

Studies on the use of self-medication have showed that the increase in self-medication was due to a number of factors such as socio-economic factors, lifestyle, ready access to drugs, the increased potential to manage certain ailments through self-care, and greater availability of medicinal goods in the market. The patient serenity with the healthcare provider, long waiting times, cost of the drugs, educational level, age, and gender are the other important factors influences self-medication. One of the most common reasons for indulging in self- medication includes high-cost fees of private doctor's consultations.

The Story of Self-Care and Self-Medication (1970-2010)

1970-The World Federation of Proprietary Medicine Manufacturers Association renamed as WSMI with an objective to stress for world-wide regulatory classification of medicinal products into two classes: Prescription and non-prescription. 1975-First international symposium on the role of the individual in primary care was held at the European Regional Offices of the WHO-stress on "self-care". 1977-World Health Assembly adopted the resolution calling for "health for all" by the year 2000 and in 1978, the Declaration of Alma-Ata. 1981-World Medical Association stressed the responsibility of people for their own health in a "Declaration on the Rights of the Patient." 1986-Ottawa (Canada) and launched "the Ottawa Charter for Health

Promotion", in which self-care was identified as one of the three key mechanisms for health promotion.

The 1990's-Guiding Principles in Self-Medication

1990's, there was an increasing recognition in many parts of the world that people were managing or treating a large proportion of their ailments without always consulting a health professional. 1998, Role of pharmacist in self-medication was explained by WSMI and the International Pharmaceutical Federation (FIP).

POSITIVE OUTCOMES OF SELF-MEDICATION

Self-medication also has advantages for healthcare systems as it facilitates better use of clinical skills, increases access to medication and may contribute to reducing prescribed drug costs associated with publicly funded health programs. [62]

Sources: The common sources of self-medication are previous prescription, friends, advertisements, chemist shop and books.

Factors Influencing: Self-medication is influenced by many factors such as education, family, society, law, availability of drugs and exposure to advertisements. [56]

Potential benefits Individual level

- An active role in his or her own health care
- Self-reliance in preventing or relieving minor symptoms or conditions
- Education opportunities on specific health issues (i.e. stop smoking aids and products

to treat heartburn)

- Convenience
- Economy, particularly since medical consultations will be reduced or avoided.

HAZARDS OF SELF-MEDICATION

Individual level

- Inaccurate self-diagnosis
- Failure to inquire about suitable medical advice promptly
- Inaccurate choice of therapy
- Fail to recognize unusual pharmacological risks
- Uncommon but severe adverse effects
- Fail to diagnosis of contraindications, interactions, warnings, and precautions
- Fail to distinguish that the same active substance is already being taken under a different name

• Fail to report recent self-medication to the prescribing physician (double medication/harmful interaction).

METHODOLOGY

Study design: A prospective cross sectional study was conducted to assess the self- medication practices and public perspectives toward role of community pharmacy professionals. The study was carried among patients who visited drug outlets during study period. The patients were selected according to inclusion and exclusion criteria.

Study site: Patients who visited selected private drug retail outlets for self- medication within the study period at Dehradun, Uttarakhand, India.

Study Criteria:

Inclusion Criteria:

- Patients visiting at selected private drug retail outlets for purchasing medication without prescription.
- Patients with either sex (male and female) or age 18 years or above.
- Patients willing to participate in the study.
- Exclusion criteria:
- Patients not willing to participate in the study.
- Patients who presented to collect drugs for other patients.

RESULTS

1. Demographic Analysis: A total of 250 responders were included for demographic analysis as per the inclusion and exclusion criteria. Gender wise distribution of patients showed that there were 182 (72.8%) males and 68 (27.2%) females in the study as shown in Table 1 and Figure 1. Table 2 and Figure 2 showed that majority of patients belonged to age group of 26-35 years (26.4%) followed by age group 36-45 years (25.2%) while age group ≥65 years contributed minimum patients (4.8%). Table 3 and Figure 3 showed that majority of patients were from nuclear family (51.6%). Table 4 and Figure 4 showed that majority of patients from middle class (39.2%) followed by lower class (38.4). Table 5 and Figure 5 showed that majority of patients have post graduate in qualification (23.2) while only 3.2% were illiterate . Table 6 and Figure 6 showed that majority of patients were employed (63.2%) followed by patients who had student (20.8%).

TABLE1. GENDER WISE DISTRIBUTION OF RESPONDERS

Category	Number of responders (%) n=250
Male	182 (72.8)
Female	68 (27.2)



TABLE2. AGE WISE DISTRIBUTION OF RESPONDERS		
Age	Number of responders (%)	
	n=250	
18-25	37 (14.8)	
26-35	66 (26.4)	
36-45	63 (25.2)	
46-55	53 (21.2)	
56-65	19 (7.6)	
>65	12 (4.8)	



Figure 2: Age wise distribution of responders

ISSN: 2278-4853 Vol. 12, Issue 1, January 2023 SJIF 2022 = 8.179 A peer reviewed journal

2. ASSESSMENT OF SELF MEDICATION PRACTICE: Assessment of self medication was analyzed using different questions as shown in following table and the respective Figures. Out of 250 responders, 32.4% responders were taken analgesic in which mostly responders take analgesics for fever (28.39%) & Paracetamol analgesic is mostly used. Out of 250 responders 14 were taking antibiotics and Loperamide were mostly used to treat gastroenteritis. Cost effectiveness (45.6%) is the reason for practicing self medication.

Drugs	Number of responders (%) n=250
Analgesic	81 (32.4)
Cold-cough	77 (30.8)
Antacid	61 (24.4)
Multivitamins or calcium	17 (6.8)
Antibiotics	14 (5.6)

 TABLE 2 COMMONLY USED DRUGS FOR SELF-MEDICATION



Figure 2: Commonly used drugs for self-medication

ISSN: 2278-4853	Vol. 12, Issue 1, January 2023	SJIF 2022 = 8.179
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TABLE 3. REASONS FOR PRACTICING SELF-MEDICATION		
Reasons	Number of responders (%)	
	n=250	
No time to go to the clinic	48 (19.2)	
Clinic is too far to go	14 (5.6)	
Non serious illness	62 (24.8)	
Ineffective drug prescribed	04 (1.6)	
Cost effectiveness	114 (45.6)	
Others	8 (3.2)	





DISCUSSION

In this study, the demographics of the patient has been studied like age, gender, family, socioeconomic status, qualification and occupation. Regarding the gender wise distribution, majority of the participants were males (72.8%) and females constituted about 27.2%. These results were in contrast with a previous study in which the majority of the participants were females (56.8%) and the males constituted for 43.2%.[2] Out of the total number of patients, the age wise distribution of the participants shows that the maximum participants were in the age

Asian Journal of Multidimensional Research ISSN: 2278-4853 Vol. 12, Issue 1, January 2023 SJIF 2022 = 8.179 A peer reviewed journal

group 26-35 years (26.4%). This result was in contrast with a previous study in which maximum participants were in the age group 40-45 years (35.8%).[40]

More than half of the participants resided in nuclear family (51.6%). Majority of the participants were from low income group (38.4%).

Majority of the participants were post graduates (23.2%). This result was in contrast with a previous study in which majority of the participants had completed high school (53.7%).[40] More than half of the participants were employed (63.2%). This study was similar to a previous study in which more than half of the participants were employed (54.2%).[40]

Most commonly used drug for self-medication were analgesics (32.4%) followed by cold- cough medications (30.8%). These results were in contrast with a previous study in which antibiotics were the most used drugs (35.5%) followed by native herb (20.5%).[10]

Gastroenteritis (42.85%) was the condition for which majority of participants used antibiotics. Fever (28.39%) was the condition for which majority of participants used analgesics.

The main reason for practicing self-medication was cost effectiveness (45.6%). This result was in contrast with a previous study in which the main reason for self-medication was minor illness (66.4%).[10].

CONCLUSION

This study was conducted with the aim to carry out Assessment of self medication practice and public perspectives toward role of community pharmacy professionals in urban area of Dehradun. The majority of patients were in the age group of 26-35 years and most commonly belongs to the nuclear family. The most commonly used drugs as self-medication are analgesics. People visit community pharmacy to seek treatment for the cough/cold. In developing country like India where we have poor economic status, education status as well as poor health care facilities people using self-medication doesn't have sufficient knowledge about its dose, time of intake, side effect on over dose and due to lack of information, it can lead to side effects such as constipation, drowsiness, dry mouth, nausea and vomiting. Hence, it is recommended that holistic approach should be taken to prevent this problem, which includes public awareness about disadvantages of self-medication; drug authorities must make it a rule to avail medicines only on the basis of prescription.

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