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Durga Joshi
State College of Nursing, Dehradun, India

Corresponding Author:
Durga Joshi
State College of Nursing, Dehradun, India

Self-medication knowledge & practice among nursing students, Uttarakhand India: With a view to develop information booklet

Durga Joshi

Abstract
Background: 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.
Objectives: The major focus of the study was to assess the knowledge & practice of use of self-medication among nursing students of selected nursing college at Dehradun. Uttarakhand, India.
Material and Methods: This cross-sectional descriptive study was conducted at the State college of nursing, Chander Nagar, Dehradun Uttarakhand, India. 160 Nursing students were selected through total enumerative sampling. The data was collected using a pre-tested semi-structured questionnaire containing open-ended and close-ended questions.
Results: The average knowledge score of respondents was (10.26 ± 1. 39). Only 124 students were practicing self-medication. The respondents (51.6%) who used self-medication found it to be time saving in providing relief from minor ailments. Main sources of information for self-medication were consulted text books (36.3%). The most common ailments for which self-medication used were: the common cold (25%), fever (20.2%) and dysmenorrhoea (14.5%). Antipyretics (25.8%), analgesics (38.7%), antihistamines (12.9%) and antibiotics (8.1%) were the most common self-medicated drugs.
Conclusion: The prevalence of self-medication among nursing students is high, facilitated by the easy availability of drugs and information from textbooks or seniors.

Keywords: self-medication, knowledge, practice, nursing students

Introduction
William Osler has said that "a desire to take medicine is perhaps the great feature which distinguishes man from animals".
This desire however may play havoc when a person starts taking medicines on their own [1]. Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO 1995). The healthcare system and healthcare professionals cannot bring about this state of health in the community alone; to achieve this requires the full involvement of individuals looking after themselves through self-care.
Self-care includes healthy living behaviors such as avoiding health risks, adequate physical exercise, proper nutrition, maintenance of mental well-being, and taking medicines (prescription and over-the counter) responsibly and appropriately [1].
The determinants of good health and the causes of disease are now better understood than ever before and the contribution that can be made by self-care is today well understood and can be put into practice [2].
People have the right and duty to participate individually and collectively in the planning and Implementation of their health care [3]. Individuals thus have a responsibility towards as well as a right to their own health, and healthcare professionals are well placed to work with them to support and encourage individual health behaviors.
With the epidemiological transition from predominance of communicable diseases to non-communicable diseases and disorders, self-care is particularly important. This evolution in disease profile will require healthcare services to reorient away from a focus on providing 'sickness services' and towards prevention and management services. Self-care - including self-medication - will in fact constitute not only the reality but also a fundamental component

of future healthcare. In fact, the use of self-care products is already a widely practiced component of self-care.

Responsible use of self-care products involves using the right product for the right indication at the right time and in the right way. This includes both self-medication using self-care products for treating common health problems and the use of self-care products to help reduce the risk of disease. Self-care products are especially designed and labeled for use by the consumer and approved as safe and effective for such use. Self-medication is a widely practiced component of self-care. The challenge and opportunity for government authorities, healthcare professionals and providers of self-medication products is to have an appropriate framework in place for responsible self-medication [2].

A person who encounters health problem and yet believes that it does not require a visit to a doctor, practices self-medication [3]. Self-medication is a human behavior in which an individual uses a substance or any exogenous influences to self administer treatment for non clinical physical or psychological ailments [4]. Self-medication involves acquiring medicines without a prescription, resubmitting old prescription to purchase medicine, sharing medicines with relatives or member of one's social wide or using left over medicine started at home [5]. Self-medication is an important part of daily self care behavior and one of the vital issues under debate in health care system [6].

According to WHO, self-medication is the selection and use of medicines by individuals to treat self recognized illness or symptoms [7]. Self-medication is a fairly wide spread practice in the world, particularly in economically deprived communities. When practiced correctly, self-medication has a positive impact on individual & health care system. It allows patients to take responsibility and build confidence to manage their own health, thereby, promoting self empowerment. Furthermore, it can save the time spent in waiting for a doctor, and even save life in acute condition and may contribute to decrease health care cost [6].

Self-medication is widely prevalent practice in India. It assumes a special significance among medical/nursing students as they are the future medical/nursing practitioners [8]. There are many reasons for the increased likelihood of self-medication among medical students. These students have easy access to information from drug indices, literature, and other medical students to self diagnose and self medicate [9].

A survey that is focused on finding out the prevalence of self-medication among undergraduate nursing students in University of Jos. One hundred and five (105) students were randomly selected from 353 students. The results revealed that more males (65.71%) participated than females (34.79%) with most of the respondents (67.62%) falling between ages 21 and 25 years. Drugs involved in self-medication included analgesics, anti- malarial multivitamins, antibiotics, antihelminthics and herbal remedy, while illnesses involved with self-medication were body pains, malaria, gastro intestinal tract disorders, worm, infection and menstrual pains. Others included cough and common cold, wounds and pile. Self-medication among undergraduate nursing students of University of Jos is high (76.19%). Therefore the effects of self-medication must be taught and controlled [10].

Self-medication is a double edged sword in that it can treat minor disease conditions that do not require the expensive medical treatment and in turn reduce the pressure on medical services particularly in countries with inadequate health care system (WHO, 2000). It provides a less cost alternative for people from lower socio-economic strata. But on the flip side, the inappropriate use of self-medication can have serious insinuation and causes wastage of resources, increases resistance of pathogens and generally causes serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence [11]. The reasons for self-medication mentioned in the literature are mild illness, previous experience of treating similar illness, economic considerations and a lack of availability of healthcare personnel. The most common medications used for self-medication are analgesics and antimicrobials [12].

In view of the increase in the practice of self-medication, WHO (1998) advised that self-medication must be correctly taught and controlled. This is true because if self-medication practice is not taught and controlled it may metamorphose to drug abuse and misuse. As earlier stated, self-medication could be dangerous if not controlled, some problems associated with self-medication according to (Pagane *et al.* 2007) cited by (Rohit, 2010) is wastage of resources, increase resistance to pathogen and generally entails enormous health hazard. Such as adverse reaction and prolong suffering. (Rohit, 2010) in a research to evaluate self-medication among professional students in North India discovered that the prevalence of self-medication was as high as 87%. They also discovered that 80.82% learn self-medication during a prior illness. Most of the self-medication was involved with headache and fever, cough and cold, gastrointestinal tract infection, mouth ulcer and throat infection. They concluded that self-medication was high in north India [11].

Improvements in people's general knowledge, level of education and socioeconomic status in many countries form a reasonable basis for successful self-medication [13].

Some researchers 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. However, People should be properly educated about the practice of self-medication in order to prevent harmful effects caused by the practice. The increasing self-medications will require more and better education of both public and health professional to avoid the complications arising from the practice [14].

No study has looked at self-medication practices and medicine knowledge, among nursing students.

This study was therefore aimed to assess the knowledge and practice related to self-medication among nursing students.

Early interventions can alter pattern of behavior that would have placed these people at risk in later life. Therefore promoting good health is essential and also felt need of people.

Objectives of the study were as follows

1. To assess the knowledge and practice of self-medication among nursing students.
2. To develop an information booklet on self-medication.

Material and Methods

In this study, Non experimental cross sectional survey design was adopted. Total 160 students were taken for study. Data was collected from 54 B. Sc Nursing 2nd year, 50 B.Sc nursing 3rd year and 56 B. Sc nursing 4th year

students. Total enumerative sampling technique was used to select the sample. The instrument used for study composed of three parts: part 1: demographic variables part 2: knowledge questionnaire; consisted of 12 items multiple choice questions. Part 3: practice questionnaire; consisted of 15 cafeteria type questions in which no one was the correct answer.

Results

The information in table 1 shows mean 10.26 and SD 1.39. Mean indicates nursing students were having good knowledge about self-medication.

Table 1: Description of mean and standard deviation of respondent's knowledge score N=160

Variable	Minimum	Maximum	Mean	SD
Knowledge	6.00	12.00	10.26	1.3

Practice: 124 (77.5%) nursing students were practicing self-medication out of 160 students

Table 2: Frequency and percentage distribution of respondent's pharmacy visit to purchase drugs without prescription over last 6 months

Pharmacy visit to purchase drugs without presecrption over last 6 months N=124		
Response	**Frequency**	**%**
Never	17	13.7
Once	35	28.2
Twice	34	27.4
Thrice	17	13.7
Four times	2	1.6
Five or more than five times	19	15.3
Total	124	100.0

Table 3: Frequency and percentage distribution of respondent's main reason for not consulting a doctor

Main reason for not consulting a doctor		
Response	**Frequency**	**%**
Did not feel the need	21	16.9
No health facility available at nearby place	2	1.6
Have confidence to treat illness on my own	11	8.9
Long waiting time in clinic	9	7.3
Minor illness	64	51.6
Money constraint	10	8.1
Previous prescription	3	2.4
Time constraint	3	2.4
Any other	1	0.8
Total	124	100.0

Table 4: Frequency and percentage distribution of respondent's main source of information for self-medication

Main source of information for self-medication (N = 124)		
Response	**Frequency**	**%**
Advertisement	3	2.4
Advise by health assistant but without prescription	24	19.4
Classmates/friends/relatives /senior	10	8.1
Consulted text books	45	36.3
Internet	6	4.8
Pharmacist	10	8.1
Previous prescription for same illness	23	18.5
Any other	2	1.6
Total	124	100.0

Table 5: Frequency and percentage distribution of type of request used by respondents to purchase self-medication drugs

Type of request used to purchase medicines without prescription (N= 124)		
Response	**Frequency**	**%**
By describing physical characteristics of drug	4	3.2
Mentioning category of the drug	18	14.5
Mentioning name of drug	69	55.6
Presenting piece of paper not a prescription	1	0.8
Showing an old sample / package of drug	1	0.8
Telling the symptoms of illness	22	17.7
Showing old prescription	4	3.2
Any other	4	3.2
Total	124	100.0

Table 6: Frequency and percentage distribution of condition most frequently used condition for self-medication by respondent's

Most frequently used condition for self-medication		
Response	**Frequency**	**%**
Acidity	13	10.5
Allergy	10	8.1
Conjunctivitis	1	0.8
Cough and cold	31	25.0
Diarrhea	14	11.3
Dysmenorrhea	18	14.5
Fever	25	20.2
Headache	6	4.8
Insomnia	0	0
Mouth ulcer	3	2.4
Nausea and vomiting	1	0.8
Urinary tract infection	0	0
Any other	2	1.6
Total	124	100

Table 7: Frequency and percentage distribution of type of drug most frequently used by respondent in self-medication

Type of drug most frequently used by respondent in self-medication (N = 124)		
Response	**Frequency**	**%**
Analgesics	48	38.7
Antacids	7	5.6
Antibiotics	10	8.1
Antiemetic	3	2.4
Antihistaminic	16	12.9
Antipyretics	32	25.8
Antispasmodic	3	2.4
Decongestant	0	0
Sedatives	2	1.6
Steroids	0	0
Any other	1	0.8
Total	124	100

Ethical Clearence: Ethical permission was taken from the ethical committee of concerned university.

Discussion

Maximum knowledge score of respondent was 12 and minimum score was 6. The average knowledge score of respondents was (10.26 ± 1. 39). So on the basis of mean knowledge score we can interpret that nursing students were having good knowledge of self-medication.

A similar descriptive study conducted by to assess self-medication practices among Palestinian medical and nonmedical university students showed that the knowledge of self-medication was good in 64.5% respondents and 35.5% respondents were having poor knowledge related to self-medication [16].

Visit to pharmacy to purchase self-medication drugs

In the present study majority of respondents visited pharmacy once 28.2% (35) to purchase drugs without prescription over last 6 month. 27.4% (34) respondents went pharmacy twice in previous six month. 15.3% (19) respondents visited pharmacy five or more than five times which revealed that these respondents were practicing self-medication very frequently.

A similar study conducted on the self-medication practices among undergraduate dental students of tertiary care teaching dental hospital in South India reveled that about 52% of the students under study practiced self-medication 2-3 times a month. While 8% of them practiced self-medication once in 2-3 weeks, 25% of the students practiced occasionally [17].

Main reason for not consulting a doctor

The most common reasons of respondent for not consulting a doctor in present study were minor illness 51.6% (64); 16. 9% (21) of them did not feel the need for consulting a doctor (21); 8.9% (11) of them have confidence to treat illness on my own; 8.1% (10) of them were the opinion that it was less expensive; 7.3% (9) of them believed that it reduces long waiting time in clinics.

The present study findings supported by a study for assessing the Self-medication patterns among medical students in South India. Study denoted that the most common reasons for self-medication were minor ailments (82%) and lack of time to consult a doctor (11%), 6% respondents did not feel the need to Consult a doctor, 8.5% students have confidence to treat on their own [18].

Main source of information for self-medication

The main common sources of information for self-medication in present study were consulted text books 36.3% (45), advise by health assistant but without prescription 19.4% (24), previous prescription for same illness 18.5% (23) and 8.1% (10) respondents taken help from classmates/friends/relatives/seniors. This findings supported by a study conducted to evaluate the knowledge, attitude and practice of self-medication among second year b.sc nursing students. The important source of information for self-medication was internet is 51 percent followed by 29 percent of students have the knowledge from print media [19].

Type of request used to purchase medicine without prescription

Majority 55.6% (69) of nursing students requested medicines by mentioning specific name of the drug; 17.7% (22) of them told the symptoms of illness to the chemist. 14.5% (18) of the students purchased medicines by mentioning category or classification of drugs like antacids, antihistaminic etc to which it belonged. It was because of pharmacology subject which they have studied in B. Sc nursing 2nd year. However, 3.2% (4) of the drug consumer were requesting drug by describing physical characteristics of drug, showing old prescription and others. 0.8% (1) of students presented piece of paper not a prescription and showing old sample for purchasing the drug.

The findings of present study are contrast with the result of study conducted to assess Self-Medication Practices in Mekelle, Ethiopia. The majority (31.9%) of the drug consumers made their requests by telling their symptoms to a pharmacy professional. However, 18.8% of the drug consumers were requesting drugs by showing old samples or packages of drug products, 12.6% by presenting pieces of paper and 7.7% by describing the physical characteristics such as the color. This was happened because present study was conducted in nursing students and they were having enough knowledge about self-medication [20].

Type of illness for which self-medication practiced

Type of illness reported by study that the students that prompted them for self-medication. The major illness reported were cough and cold 25%, fever 20.2%, Dymenorrhoea 14.5%, diarrhea 11.3%, acidity 10.5%, allergy 8.1% and headache 4.8% which is concordance to study conducted a to assess self-medication practices among undergraduate nursing students in south India which revealed that the conditions prompting self- medication were the common cold and fever (37.56%) and pain (22.33%), cough (13.19%), sore throat (12.18%), dysmenorrhea (6.09%), vomiting (3.55%), diarrhea (3.04%) and 2.03% for others (constipation) [21].

Type of drug used in self-medication

The most often requested category of drugs by self medicated respondents was analgesics 38.7%, antipyretics 25.8%, antihistaminic 12.9% and antibiotics 8.1%. Less requested category of drugs for self-medication was antacids 5.6%, Antiemetics / Antispasmodics 2.4% and sedatives 1.6%.

This is similar to cross sectional survey done earlier to assess self-medication practices among undergraduate nursing students in south India in which showed that the classes of drugs that were commonly used were antipyretics (43.3%), analgesics (32%), antipyretic (65%). Some potentially harmful drugs were also used, such as antacids (8%), sedatives (0.6%) and others (0.6%), antibiotics (15.33%) [21].

Limitation

The study was limited to one hundred sixty samples only. Non-standardized tool was used for this study.

Conclusion

The practice of self-medication is a global challenge. Students practice self-medication because of non availability of medical practitioners, cost of visiting the hospital, knowledge about drugs, mild nature of illness and emergencies. The prevalence of self-medication is high among undergraduate nursing students, just like other parts of the world and can lead to drug abuse/misuse as such measures must be instituted to teach and control self-medication. Illnesses involved with self-medication among the students included pains, gastrointestinal tract disorders, infection, menstrual pains and others like cough, common cold. Students commonly use analgesics, antidiarroheal, multivitamins, antibiotics, antihelminthics and antipyertics in self-medication. The study revealed that majority of the nursing students was having good knowledge of the self-medication as the mean knowledge score was 10.26. Some of the students were practicing wrong self-medication, oral antibiotics was also used under self-medication.

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