

A Qualitative Study to Explore the Use of Self-Medication and Influencing the Factors among the University Students

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Abstract: Background: Self-medications are more practicing in developing countries due to the limited healthcare resource and facilities. The prevalence rate of self-medication has increased dramatically in India. This study was conducted to determine use and influencing factors for self-medication from the students who are studying in undergraduate and postgraduate programmes of Nursing, Physiotherapy and Pharmacy colleges at CHARUSAT University between 1st to 30th April 2023.

Method: A qualitative research design incorporating 12 semi-structured, face-to-face interviews was conducted with students by using the non-probability purposive sampling technique. All the interviews were conducted, audio recorded and thematic analysis was used for data analysis.

Results: Data saturation was achieved with 12 interviews with 7 female and 5 males with mean age 21.6 years. Six themes were identified and one central theme Balancing health knowledge and responsibility – Navigating self-medication safely was identified. Some of common medicines were identified like paracetamol, vitamin E, fish oil, aspirin and levocetirizine and some factors were negative impact, reasons, origins, and home remedies.

Conclusion– The para medical students of CHARUSAT University at Gujarat, India are used the self-medication including paracetamol, Vitamin E, fish oil, aspirin, ORS solutions, Cyclopam MF, Rantac and pantoprazole also several influencing factors like advertisements, economical factors, social factors, hospital related factors and professional factors. This study demonstrates the value of educating university students to modify their attitudes on self-medication. Health care policy maker provide a strict policy on selling the without prescription medicine.

Keywords: Qualitative; University Students; Use Of Self-Medication; Influencing Factors Of Self-Medication, Pilot Study.

1. Introduction

"Taking drugs, herbs, or home remedies on one's own initiative, or on the advice of another person, without consulting a doctor" is the classic definition of self-medication.[1] The prevalence of self-medication (SM) has increased all countries including India. Evidence suggest that 60% prevalence rate of self-medication practiced in central India.[2] For those who cannot afford professional medical treatment, self-medication is a replacement because of lower cost.[3] A systematic review says that during covid 19 the use of SM is 20-83% among students.[4] Another evidence shows results 97.2% of medical students and 70.1% of university students generally practice the SM.[5] In Gujarat SM practices in general population prevalence rate is 78.3% and 55.32% older among younger age groups.[6]

Schedule K of the Drugs and Cosmetics act (D&C) mention the name household remedies not mention the word OTC in D&C act 1940&1945. The medications that are still considered "household remedies" include Paracetamol tablets, Analgesic Balms, Antacid Preparations, Calcium preparations with or without Vitamin D, Gripe Water for use of infants, Inhalers etc. [7,8]. A few factors contributing to self-medication included knowledge about medications, prior experience, quick access to medications, a lack of time, availability of healthcare professionals, the cost of a doctor's appointment, lack of concern for patient privacy, and an increasing amount of information.[9] Learning pharmacology may have a greater impact on this behaviour since students contemplating careers in medical and health-related areas are more likely to take medications without a doctor's prescription.

The aim of the research was probably be to investigate and comprehend use of self-medication while concentrating on the factors that encourage self-medication.

Objectives of the study were 1. To explore the use of the self-medications among university students. 2. To determine the influencing factors usage of self-medication among university students. Assumptions of this study were 1) There may or may not be use of self-medication among the university students. 2) There may be few influencing factors of self-medication among the university students. This qualitative method offers a deeper knowledge of self-medication habits among university students as well as the factors that affect their use. This study was conducted to explain the use and influencing factors among the university students.

2. Methods

2.1 Research Design- In this study, descriptive qualitative research was used. The desired outcome of descriptive qualitative research is delivering an in-depth understanding of a particular event or topic.

2.2 Sample and Sampling method- In this study, samples were 12 students studying in Nursing, Physiotherapy, and Pharmacy colleges of Charusat University of Science and Technology as per the inclusion and exclusion criteria of the study who are recruited by purposive sampling technique. Sample was carried out until data were saturated.

2.3 Population- Target population – those students studying at CHARUSAT University.

Accessible population – those students who studying in the Nursing, Physiotherapy and Pharmacy colleges of CHARUSAT University.

2.4 Criteria for Selecting of Sample.

1. Inclusive criteria:

- Those participants who are present at the time of data collection.
- Those participants who are studying in the Nursing, Physiotherapy, and Pharmacy College of CHARUSAT University
- Those participants from undergraduate and post graduate programme like B.sc and M.sc Nursing, B.PHARM, and M.PHARM, B.PT AND M.PT.
- Those participants who willingly participate in the research study.

2. Exclusive criteria:

- Those who are suffering from any medical illness.
- Those who are taking the prescribed medicine

2.5 Research Setting- In the present study research setting were Nursing, physiotherapy, and pharmacy colleges from Charotar University of Science and Technology.

2.6 Data collection- The most important part of any study is the collection of appropriate information which gives data in the form of answers to all questions which were asked while data collection. Data has collected during the 1st of April 2023 to 10th may 2023. The study was planned under institutional ethics committee approval. The Principal of Manikaka Topawala Institution of Nursing granted permission. The experts approved the research tool. Before beginning the interview, the students' informed consent was obtained. The telephone interview has been recorded. Information was gathered by asking open-ended questions during a semi-structured interview that was divided into three parts: an introduction, a section where all questions pertaining to self-medication use and influencing factors were asked, and a conclusion. The interview lasted about 40–45 minutes. An interview was conducted in Gujarati, with an English transcript.

2.7 Data Analysis- Data was gathered through semi-structured interviews. Frequency distribution analysis was used to examine socio-demographic data. This study's analysis was thematic. All interviews, whether in English or Gujarati, were recorded using voice recorders on Android smartphones, and a verbatim transcript of each interview was then created. The interview's data were analysed using qualitative thematic analysis, which involved identifying thematic analysis information units in response to each question. These units

may include concepts, phrases, and words that were then categorized into various categories and subcategories and given a theme.

2.7 Ethical consideration- The Ethics committee of CHARUSAT University was approved this study. The participants' written informed permission demonstrates the ethical consideration that was given. Participants' confidentiality and anonymity were preserved throughout the study. A completed synopsis was submitted for IEC clearance no IEC/CHARUSAT/22/85. The audio files were also saved by corresponding author in file with password also participants information is not mentioned in this paper.

3. Results

The age range of participants was 18 -24 years old with majority (4, 33.33%) of them being 24 year old. In the study 7 female (58.3%) and 5 male (41.7%) were present. Majority of participants belongs from nuclear family (9, 75%) and students were studying in 1 to 4 year and 7 participants from undergraduate course (B.Sc. Nursing, Bachelor of Pharmacy and Bachelors of physiotherapy) and 5 from post graduate course (M.Sc. Nursing, Master of Pharmacy, Masters of physiotherapy). All the students had experienced of taking self-medication. Analysis of data reveals main seven themes relating to participants experience, knowledge, attitude, belief and perception use of self-medication.

3.1 Theme one: Accessibility of self-medication.

While interview was taken that interviewer was ask the question about the general meaning of self-medication. Majority of respondents given the response about the meaning of self-medication like without prescription of doctors taking the medicine called as self-medication. “Self-medication is when I treat myself without a doctor's order is self-medication.” (Participant -05).

“Ok, self-medication is basically that medicine we take at home without any doctor’s prescription called self-medication” (participant -02).

3.2 Theme two: Self-medication choices, practices and autonomy.

The second theme revealed in the analysis of the interview including responses that reflect the participant’s choice, practice and autonomous. This theme comprised with five subtheme namely selection of medicine dose, flavor of medicine, experience, self-diagnosis and frequency of medicine.

3.3Theme three: Selection of self-medication

As can be seen in table 3, students select different categories of medicine based on their experience and health problems like pain, cosmetics, cough, headache, and different emergencies.

3.4Theme four: Adverse effects of self-medication

Participants had experienced of side effects of self- medication. This theme comprised with six subthemes including Feeling discomfort, Acidity, pimples, Long and painful periods, Burning sensation, Hormonal changes, Increased sleep, and Nausea due to self-medication.

3.5Theme five: Influence and impact of self-medication

Participants had several factors which influence to take self-medication such cultural practices, economical factors like charges of hospital visit, and advertisement influences lots to consumption of self- medication.

3.6Theme six: source of self-medication

Participant had different sources information which used for taking self-medication majority of them used their pharmacological knowledge before use the medicine.

Table 2	
Sub- theme	Dialogue
Sub-theme 1:Deciding the Dose	“I don’t go for heavy doses I have started from small doses” (p-01)
Sub-theme 2: Deciding the routes	“Mostly used oral routes for taking self-medication, other than topical routes like eye drops, and eye drops, oils.” (p-05)

Sub-theme 3: Flavour	“All the medicine are in bitter in the test I don’t like a bitter test.” (p-03)
Sub-theme 4: Self-experience	I’m a nursing student so I know which medicine should be taken for a problem or disease also have one 1 year of hospital experience ” (p- 012)
Sub-theme 5: Self-diagnosis	I feel tired and suddenly have a fever, mood swings during periods, and headaches and pain in my legs that time decide take self-medicines (p-07)
Sub-theme 6: Duration	“if I take 1 tablet at that, it does not give the proper effect then take another tablet within 2 hours also, twice and three times in day depending upon the symptoms. (p-012)

Table 3	
Sub- theme	Dialogue
Sub-theme 1: Self-medication for pain	“hmm like taking paracetamol for fever, joint pain” “mostly commonly I don’t to a physician for small conditions like headache, aspirin and paracetamol”
Sub-theme 2: Cosmetic and dermatology concerns	“vitamin E pills for facial beauty products”
Sub-theme 3: Self-medication for reducing the cough	“Generally we use cough syrup like asthakinid is one of the cough syrups we use as self-medication”
Sub-theme 4: Emergencies	“ taking unwanted 72 pills use to prevent pregnancy is more common among the young stars”

Table 4	
Sub- theme	Dialogue
Sub-theme 1: Feeling discomfort	“yes felt side effects like a body heat some irritation while passing urine while taking the medicine”p-01
Sub-theme 2: Pimples as the effect of face wash use	“. when I used the face wash after using it have more pimples and wrinkles on my face so that time I consult the doctor”p-02
Sub-theme 3: Increased sleep	“yes while taking medicine for migraine feeling more sleepy ”
Sub-theme 4: Long and painful periods	“Yes, this folic acid has side effects such as increased blood flow in menstruation and blood becomes thick and sometimes pain also occurs” p-03

Table 5	
Sub- theme	Dialogue
Sub-theme 1: Influence of advertisement of self-medication	“yes they influence a lot while watching the tv or something they show like take the medicine instant results show pain is gone yes they influence a lot ” p-012
Sub-theme 2: Economical factor	“yeah doctor will take case fees also and medicine charges also so while taking the self-medicine it’s of course cost will less people go to the pharmacy and take the medicine”p-04
Sub-theme 3: Long queue for consultation	I have faced waiting in line to consult a doctor too much I had waited for two and half hours to consult the doctor for a leg injury its very irritating I’m in pain and still wait for 2 to 3 hours that can be drawn back for patients” p-03
Sub-theme 4: Travelling issues	Some hospitals are very far away, there is the issue of

	transportation, then there are some medicines, which are available only from the medical store in the hospital, which is prescribed by the doctor, and it is not available anywhere, it is better to stay at home get well by taking self medicine
Sub -theme 5: Heath care person's advice	“Yes, sometimes there is some medicine like if there is cough, cough syrup is also advised along with other medicines, if someone asks about the medicine, then I tell the same medicine which does not cause any problem.”
Sub- them 6 :- Profession related factor	yes when examining clinical duty files to find out what is medication antihistamines, analgesics, dosage, frequency, when to take side effects also what are nursing responsibilities when taking medication”
Sub theme 7- Personal factor	I did not have time to go to the hospital for minor problems and since then my mother doesn't even know I use self-medication.”

Table 6	
Sub- theme	Dialogue
Sub-theme 1: Medicine studies	“We are in medical profession so we are having the knowledge so that pharmacological subjects also influence a lot but we have to use it in wiser way what has to done because as physiotherapist we are not prescribe any medicine we have to just interpreted that what they have taken how alters the conditions also we have to identified that pain is subside because of pain killers or exercises I felt that pharmacological subject lot thought to us.”(p-01)
Sub-theme 2: Mass media	generally people relay on online source like google and pharmacies like I generally search on google and write about my disease condition it give the name of medicine which I should take”p-01

Discussion- The results of study showed that self-medication is a common phenomena among the paramedical students. The majority of respondents provided a definition of self-medication that included taking medicines without a doctor's prescription. According to the study, students are more likely to self-medicate by using oral and topical delivery systems for their medications. Similar research demonstrates that when taking self-medication, students choose oral ways (93.7%), topical approaches (18%), and inhalation techniques (1.7%). [10]The findings of the study indicate that using medications like aspirin, paracetamol, and voline gel to treat headaches, fever, menstrual cramps and discomfort is a common practice. According to a similar survey, the most prevalent conditions for which people self-medicate with analgesics are headache (33.6%), common cold (17.5%), dysmenorrhea (13.8%), and pain in the bones and joints (5.3%). Non-steroidal anti-inflammatory drugs (NSAIDs) and acetaminophen were used by 49.6% and 47.2%, respectively, of people who self-medicated with analgesics, according to the study.[11] However, according to the study, students are using medications to promote hair growth. The results of another research study indicate that 48.5% of beauty and cosmetic goods are used as self-medication by students, who often use these items.[12] The study results show that students are taking cough syrups for acute cough as self-medication and that syrups are effective in acute cough conditions. During the covid 19 pandemic, medical students were using 7.8% cough syrups for the prevention of infection.[13] When there is an emergency, several medications are used, such as oral contraceptives. According to a survey, 3.6% of women used oral contraceptives, and 33.1% had an emergency. [14] The students were taking the medicine that time due to over dose of the medicine facing some adverse effects of medicine like feeling discomfort while passing the urine, acidity problems while taking the analgesic, getting more pimples and wrinkles while using the different facewash , taking more folic acids facing the problems of increasing the blood flow of menstruation ,thick and painful , in summer more using the balm burning sensation feels, hormonal changes and irregular periods while using the oral contraceptives. Some of students claim that

advertisements had a greater impact on their decision to self-medicate than watching advertisements on television, using social media, reading advertisements in pharmacy catalogs, or taking medications that were simple to use and provided quick relief. In a cross-sectional study conducted by G. Sivakamasundri and R. Aruankumar, it was found that 85% of people buy drugs after seeing an advertisement from different sources.[15] Students contend that going to the doctor costs more than self-medicating and that other expenses, such as lab and pharmaceutical charges, are also higher. A comparable study reveals that the expense of consultations, familiarity with similar conditions, and lack of transportation account for 23.9%, 74.6%, and 10%, respectively, of self-medication.[16] All medical and paramedical studies on the topic of pharmacology are required in order to have sufficient knowledge for self-medication. Reading literature to learn about self-medication, acquiring medications from family and friends, and through the media. According to comparable research, those who self-medicate read 1.4% of periodicals, 9.3% of pharmacologists, 13% of hospitals, 16.3% of television, 19.9% of social media, and 20% of the internet.[17]

4. Conclusion

There is an essential need to study the difficulties and negative impacts related to self-medication among college students. This study's findings assist nurses and other healthcare providers in understanding how to manage the problems associated with self-medication and improve university students' well-being.

5. Limitations

The study is limited to students from the Nursing, Pharmacy, and Physiotherapy colleges of Charotar University Science and Technology.

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