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PREVALENCE OF SELF-MEDICATION PRACTICES AMONG UNDERGRADUATE NURSING STUDENTS AT PRIVATE INSTITUTIONS IN KARACHI

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ABSTRACT

Background: Self-medication, the practice of taking medicine without the guidance of a healthcare professional has become a widespread phenomenon globally. Undergraduate nursing students are at particular risk due to their exposure to medications and their future role as healthcare providers. Purpose: To determine the frequency of self-medication practices among undergraduate nursing students at private institutions. Methodology: A descriptive cross-sectional study was conducted on undergraduate nursing students at Jinnah College of Nursing (Sohail University) and Ilmiya Institute of Nursing Karachi from 15th Aug 2023 to 15th Nov 2023. The data were collected through an adopted questionnaire. IBM SPSS Statistics version 25 was used to analyze the gathered data. Frequency, Percentage, Pie chart, Clustered Column, and Clustered Bar chart were used to summarize the prevalence of self-medication practice scores of participants. Result: Self-medication is broadly practised (76.9%) by Jinnah College of Nursing and Ilmiya Institute of Nursing students. The reason for the increased occurrence of self-medication was to purchase medications from pharmacy shops directly as they are time-saving, and less expensive than doctor's fees. Painkillers analgesics were the most common 120 (61.5%), followed by Drugs for fever antipyretics 100 (51.3%), cough, cold, and sore throat 95 (48.7%). Conclusion: Self-medication use is common among undergraduate nursing students. It can have a significant impact on their health. Educational institutions need to promote awareness of the uncertainties concomitant with self-medication and encourage nursing students to adopt responsible health habits.

Key Words: Prevalence, Self-medication, Nursing Students, Diseases.

INTRODUCTION

Pakistan, home to about 241.49 million people, has a high prevalence of both infectious and non-communicable diseases, making it difficult to provide high-quality healthcare (Buriro et al., 2023). There is a connection between a higher incidence of mental health challenges and some common endocrine illnesses characterized by hormone imbalances and irregularities in lifestyles (Buriro et al., 2023). Self-medication (SM) includes the practice of medicinal products by the user to treat self-diagnosed illnesses or indications, or the irregular or sustained use of medication approved by a physician for long-lasting or repeated diseases or signs as cited in (Araia et al., 2019). Self-medication is a usual exercise in numerous rising nations, which involves the administration of prescriptions in the nonappearance of a current medication or without accessing a healthcare professional (Buriro et al., 2024). Nonprescription medications or prescribed medications including antibiotics are used for self-treatment (Akande-Sholabi et al., 2021). Numerous studies have been conducted to assess the frequency and implementation of self-medication in the general population (Limaye et al., 2017). The frequency of self-medication practices among nursing students is high, in various studies; the incidence ranges from 44.8%

(Rahimisadegh et al., 2022) to 97.3% (Malli et al., 2023). Sajjad et al., 2023 suggested that the greatest common reasons for self-medication are mild symptoms and low disease severity. Another study conducted a meta-analysis and systematic review to examine the prevalence of self-treatment in college students worldwide (Buriro et al al., 2016). The outcomes displayed that studying nursing at college involves more self-medication practices than other undergraduate students. Headache was the prevalent condition for self-medication (Samizadeh et al., 2023). However, several potential risks are posed by improper self-medication, such as deferral in obtaining proper medicinal guidance, Difficulty recognizing or self-assessing contraindications and potential interactions with prescribed medications, neglecting to communicate ongoing self-medication to the prescribing doctor (increasing the risk of dual medication or harmful interactions), improper duration of medication usage, and the potential for dependence and misuse are among other concerns (Rathod et al., 2023).

Research Problem Statement

Self-medication: taking medications without professional medical guidance, is a growing problem worldwide. For healthcare students, such as undergraduate nursing students, these practices have profound consequences for personal health. Therefore, undergraduate nursing students need to understand self-medication practices, particularly in private institutions.

Research Objective:

1. To determine the frequency of self-medication practices among undergraduate nursing students at private nursing institutions.

Research Question

1. RQ: 01. What is the prevalence of self-medication practices among undergraduate nursing students at private nursing institutions?

Rationale of the Study

Self-medication, the exercise of using medicines without the advice of a healthcare professional has become a widespread phenomenon globally. Undergraduate nursing students are of particular interest due to their role as future healthcare providers and their exposure to medical knowledge. For those who are studying nursing, it is essential to check the occurrence of self-medication practices among students pursuing their undergraduate studies in nursing because it can greatly impact their health.

Literature Review

Self-Medication as a Global Phenomena

Self-medication, the practice of consuming medication without a prescription or consultation with a healthcare professional, is a widespread phenomenon globally. Among various demographic groups, undergraduate nursing students represent a critical population to study due to their knowledge of medications and healthcare practices (Buriro et al., 2016). This research paper aims to investigate the prevalence of self-medication practices among undergraduate nursing students at private institutions in Karachi, Pakistan. Understanding the patterns and reasons behind self-medication among this cohort is essential for developing interventions to promote responsible medication use and ensuring the well-being of future healthcare professionals (Buriro et al., 2024).

The prevalence of self-medication among undergraduate nursing students can be influenced by various factors, including accessibility to medications, knowledge of pharmaceuticals, attitudes towards healthcare, and cultural beliefs (Buriro et al., 2024). Karachi, being one of the largest cities in Pakistan, presents a unique context where diverse socio-economic backgrounds and cultural practices intersect, potentially impacting self-medication behaviours (Buriro et al., 2023). By focusing on nursing students in private institutions, this study aims to explore how access to healthcare, educational background, and socio-cultural factors contribute to the prevalence and patterns of self-medication practices within this specific demographic.

Furthermore, the implications of self-medication among nursing students extend beyond individual health risks to broader healthcare systems and patient care standards. Given their role as future healthcare providers, understanding the prevalence of self-medication among nursing students is crucial for addressing potential challenges in medication adherence, patient counselling, and promoting evidence-based practices within

healthcare settings (Buriro et al, 2024). Identifying the prevalence and factors associated with self-medication practices among undergraduate nursing students can inform educational curricula, healthcare policies, and interventions aimed at promoting responsible medication use and enhancing patient safety (Masumoto et al., 2023).

The prevalence of self-medication practices among undergraduate nursing students in Karachi's private institutions is essential for understanding medication-related behaviours within this critical demographic (Chaudhry et al., 2022). By exploring the factors contributing to self-medication practices, policymakers, educators, and healthcare professionals can develop targeted interventions to promote responsible medication use and ensure the delivery of quality healthcare services (Setiadi et al., 2022). This research contributes to the broader discourse on medication safety and public health interventions in Pakistan, emphasizing the importance of evidence-based strategies to address self-medication practices among future healthcare professionals.

Methodology

Study Setting: Jinnah College of Nursing (Sohail University) and Ilmiya Institute of Nursing (IION) Karachi were selected as study settings.

Study Design: A Descriptive cross-sectional study design was used to determine the frequency of self-medication in undergraduate nursing students.

Study Population: Undergraduate nursing students from Jinnah College of Nursing (Sohail University) and Ilmiya Institute of Nursing (IION) Karachi.

Study Duration: The study duration was from Aug 2023 to Nov 2023.

Sampling Technique: The selection of study participants was utilized by a non-probability (purposive) sampling technique.

Sample size: to calculate sample size Slovin's Formula was used with a 95% confidence interval that give results of 195 sample size.

Inclusive criteria: Undergraduate nursing students from

1: Jinnah College of Nursing (Sohail University)

2: Ilmiya Institute of Nursing (IION)

Exclusive criteria: DPT, Pharmacy, MBBS, BDS, Midwifery, Nursing Diploma, and Nursing student other than Jinnah College of Nursing (Sohail University) and Ilmiya Institute of Nursing (IION)

Dependent variables: Prevalence of self-medication practice.

Independent variable: Demographic data, such as age, gender, and academic year.

Data Collection Procedure: The data was collected through a valid questionnaire which was developed by Md. Abu Bakar Siddique Jami, East West University, Dhaka, Bangladesh, with permission. Data collection approval was taken from Jinnah College of Nursing (Sohail University) and Ilmiya Institute of Nursing (IION) and permission was taken from all undergraduate nursing respondents.

Data Analysis: IBM SPSS Statistics version 25 was used to analyze the gathered data. Descriptive statistics Frequency, Percentage, Pie chart, Clustered Column, and Clustered Bar chart were used to summarize the prevalence of self-medication practice scores of participants.

Ethical Considerations:

Ethical considerations were strictly followed permission was taken from both the study settings and study participants. Confidentiality and anonymity were assured. The study decorum was similarly permitted by the Ethical Review Committee of Sohail University Karachi.

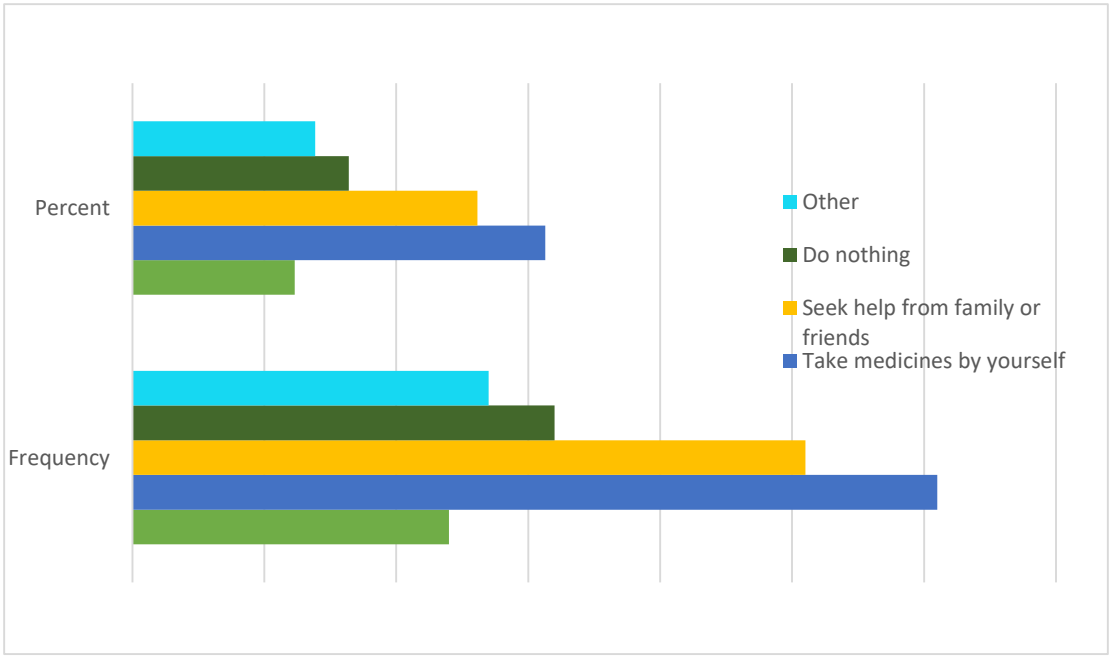
Result

A collective count of 195 students studying nursing contributed to the study, The findings indicated, that the majority 168 (86.2%) of students were in the age group of 20-24, most of the students were male 140 (71.8%) and females were 55 (28.2%). In this current study, most of the students were from Jinnah College of Nursing 111 (56.9%) and Ilmiya Institute of Nursing 84 (43.1%). The majority of the students were 4th year 53 (27.2%) and 2nd Year 50 (25.6%). Table 1 shows the demographic attributes of the study participants.

Table 1:
Demographic attributes of Participants.

Variable		Frequency (%)
Age (Years)	15-19	16 (8.2)
	20-24	168 (86.2)
	25-29	9 (4.6)
	30-34	2 (1.0)
Gender	Male	140 (71.8)
	Female	55 (28.2)
Institute	Jinnah College Of Nursing (SU)	111 (56.9)
	Ilmiya Institute of Nursing (IION)	84 (43.1)
Academic Year	1st year	45 (23.1)
	2nd year	50 (25.6)
	3rd year	47 (24.1)
	4th year	53 (27.2)

The survey question, "When you feel any physical discomfort, what do you do most of the time?" yielded a variety of responses from the participants. The responses were categorized into the following options: 12.3% of respondents indicated that they typically seek medical attention from doctors when experiencing physical discomfort. 31.3% of participants mentioned that they self-administer medicines to alleviate physical discomfort without consulting a doctor. 26.2% of respondents reported that they turn to family members or friends for assistance when experiencing physical discomfort. 16.4% of participants mentioned that they choose to do nothing or take no action when faced with physical discomfort. 13.8% of respondents responded falling into the "other" category, indicating a range of diverse strategies or actions taken. The result is summarized in the following Clustered Bar chart.

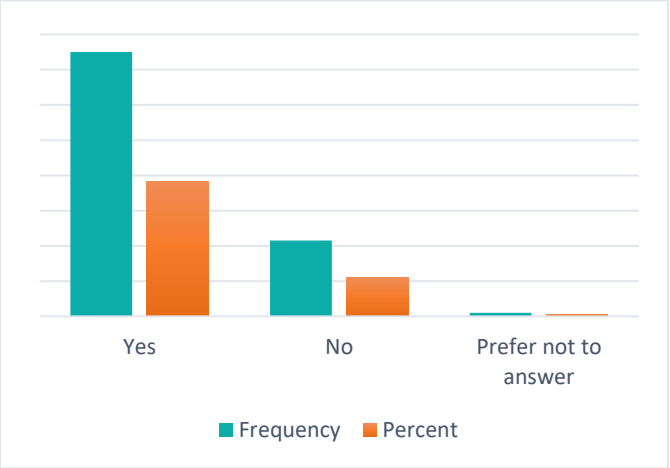


Among the survey participants, a significant portion demonstrated familiarity with the concept of self-medication. When asked, 'Are you aware of the term Self-medication?' 176 (90.3%) responded positively, indicating a general understanding of this healthcare practice within the study population, 14 (7.2%) responded negatively, while 5 (2.6%) responded: "prefer not to answer". The result is summarized in Table 2.

Table 2:
Awareness of the term Self-medication

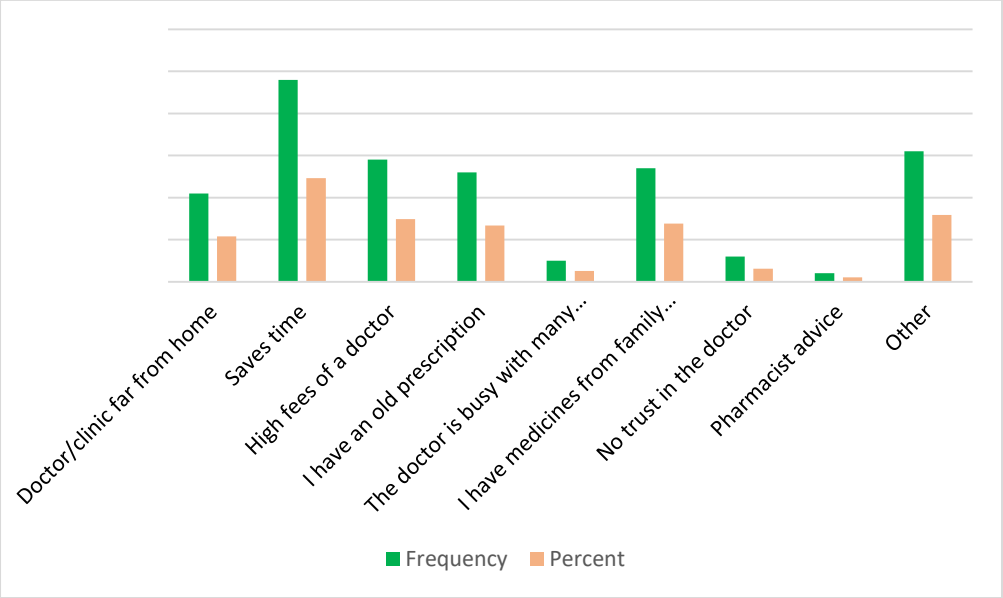
Response	Frequency (%)
Yes	176 (90.3)
No	14 (7.2)
Prefer not to answer	5 (2.6)

A significant portion was found to have engaged in the purchase of medication without a valid prescription. It is observed in (150) with 76.9%, indicating an important tendency of self-medication without proper medical guidance within the study population. The responses are summarized in the Clustered Column chart.



For those who reported engaging in self-medication, the participant was asked for the reason for self-medication. The responses are summarized in the Clustered Column chart.

Reason for self-medication



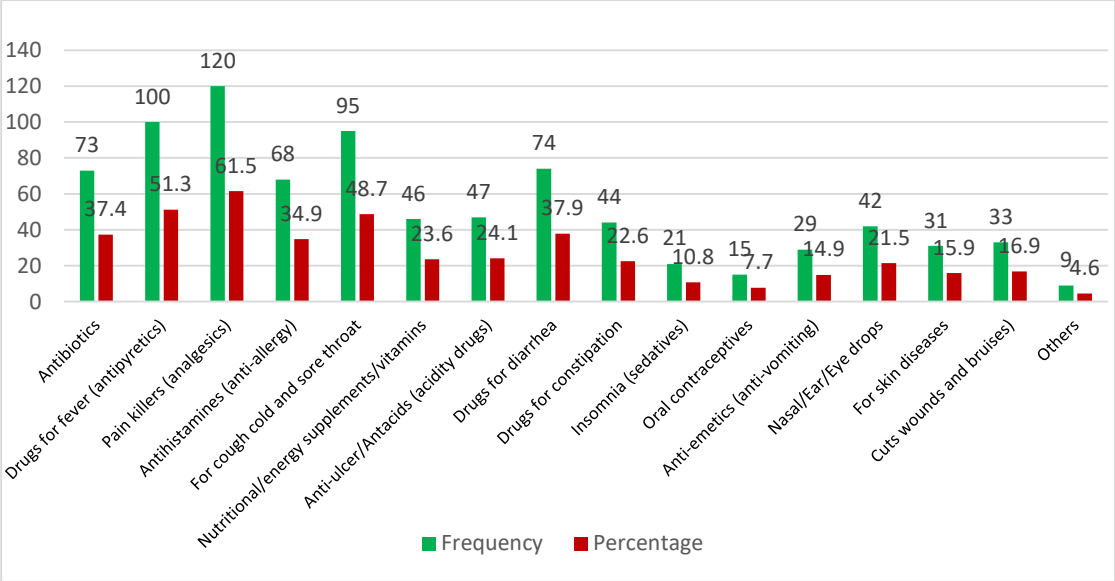
The study determined the frequency of self-medication practice among undergraduate nursing students. Participants were asked, "Your history of self-medication practice (in the last year). The results are presented in

Table 3:
Self-medication Practices

Self-medication Practices	Frequency (%)
1 - 2 times	55 (28.2)
3 - 4 times	50 (25.6)
4 - 5 times	22 (11.3)
5 - 6 times	11 (5.6)
7 or more times	36 (18.5)
Never	21 (10.8)

Participants who engaged in self-medication were also asked about the drugs taken mostly without prescription (Multiple choices allowed) is shown in the Clustered Column chart.

Drugs have been taken mostly without a prescription.



Participants were asked for their considerations when selecting a drug. Table 4 shows the consideration that is identified.

Table 4:
Consideration while choosing a self-medicated drug.

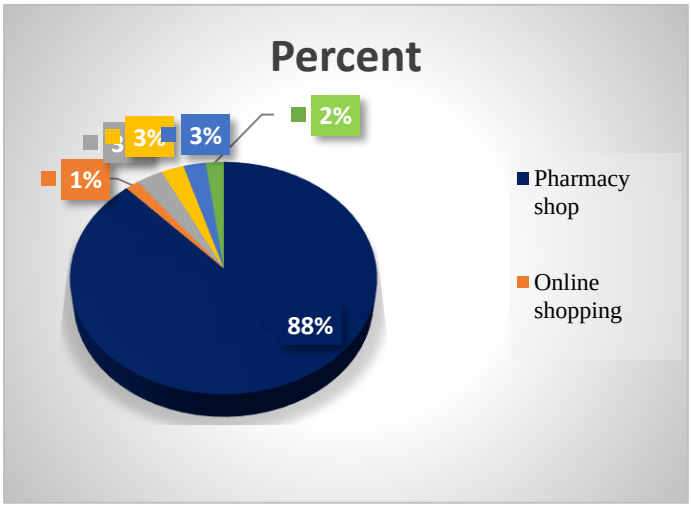
Consideration	Frequency (%)
Price	9 (4.6)
Pharmaceutical Company	37 (19.0)
Type of medicine	48 (24.6)
Brand	53 (27.2)
Someone's suggestion	34 (17.4)
Others	14 (7.2)

The research questionnaire includes a question regarding sources from which to purchase self-medicated medications. The findings indicate a gaining channel:

A significant proportion of respondents 172 (88.2%) reported purchasing self-medicated medication from pharmacy shops. A substantial portion of the participants 6 (3.1%) mentioned procuring self-medicated medication from primary healthcare centers. Some respondents 5 (2.6%) indicated that they obtain self-medicated medications from medical representatives and Friends/family, reflecting informal sharing within their social circles. A minority of participants 4 (2.1%) stated that they purchase self-medicated medication from sources not covered in the mentioned categories.

The result is summarized in the Pie Chart.

Purchase source for self-medicated medication.
Among the survey participants, 51.8% reported that



they always check prescribing information before self-medicating, 42.1% sometimes, and 6.2% never check the prescribing information. The result is summarized in Table 5.

Table 5
Participants' Understanding of Prescribing Information Instructions.

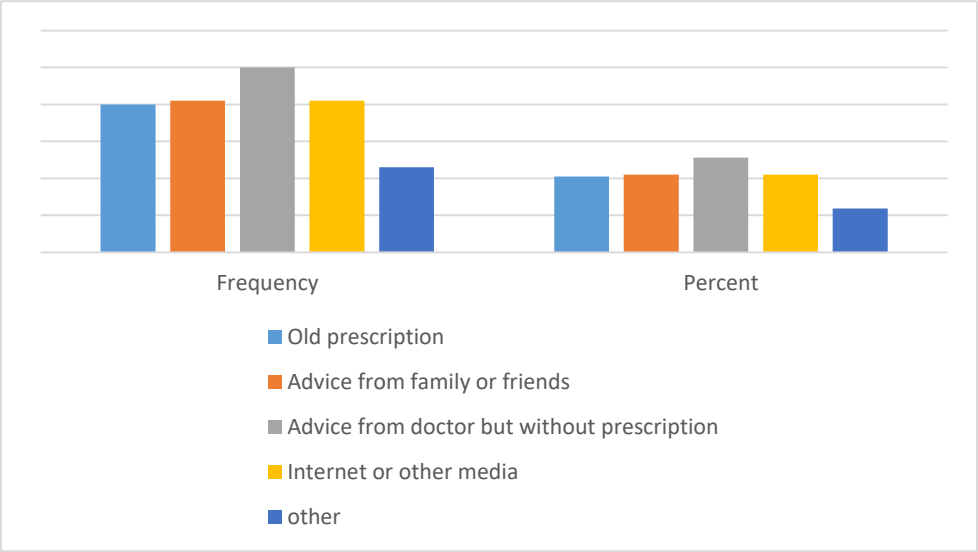
Understanding level	Frequency (%)
Fully understood	88 (45.1)
partially understood	99 (50.8)
Not at all	8 (4.1)

The table above illustrates the distribution of participants' understanding of the prescribing information instructions. Most Participants 99 (50.8%) reported "partially understood" 88 (45.1%) reported "Fully understood" and a smaller proportion 8 (4.1%) reported "Not at all". In our questionnaire participants were asked, "Are you aware of the term drug-drug interaction?" 131 with a percentage (67.2%) of the participants answered "Yes" and 64 (32.8%) of the participants answered "No". In this study, the researchers investigated the awareness of drug-food interactions among participants. Our findings indicated that 129 (66.2%) were aware of the term, while 66 (33.8%) were not aware.

The present study examined the potential adverse drug reactions associated with self-medication practices in which 62 (31.8%) responded "Yes" indicating that they were aware of the potential adverse drug reaction associated with their self-medication practices, and 31 (15.9%) responded "No" suggesting a lack of awareness regarding potential adverse drug reactions. On the other hand, 102 (52.3%) responded "About some drugs."

Participants were asked about their sources of information for self-medication practices. The result is summarized in the following Clustered Column chart.

Sources of information for self-medication



The participants were asked whether they had ever faced any kind of adverse effect after taking the drug without a prescription. The results revealed that 36.4% of participants answered "Yes" indicating that a subset of the respondents had experienced adverse effects, while 63.6% answered "No" suggesting that the majority of the respondents had not encountered adverse effects.

In response to the question" Overall, do you think self-medication practice is safe?" responses were categorized as shown in Table 6.

Table 6:
Self-medication practice safe

Response	Frequency (%)
Yes	44 (22.6)
No	88 (45.1)
Not Sure	63 (32.3)

Discussion

Recent research was conducted to determine the frequency of self-medication practices in undergraduate nursing students. The study showed that self-medication is broadly adopted (76.9%) by the nursing students at Jinnah College of Nursing and Ilmiya Institute of Nursing. The cause for the increased frequency of self-medication was to purchase medications from pharmacy shops directly as they are time-saving, and less expensive than doctor's fees.

The present study exposed that Undergraduate nursing students frequently engage in the practice of self-medication. Most of the students practised self-medication of one or more drugs with a frequency of 150 with 76.9% over 1 year. These findings contrasted with the studies from (Abdi et al., 2018). In this study, the primary cause reported by students for engaging in self-medication was that self-medication saves time by 48 (24.6%). These findings contrasted with the studies from India (Singh et al., 2022) and Malaysia (Ali et al., 2010). Painkillers (Analgesics) were the most common (120) at 61.5 %, followed by Drugs for fever (antipyretics) (100) at 51.3%, cough, cold and sore throat (95) at 48.7%. This finding contrasts with the studies from Ethiopia (Ayalew, 2017) and Karachi (Zafar et al., 2008) in which the furthermost frequently utilized medications for self-treatment included analgesics and cough, cold and sore throat (Kasulkar & Gupta, 2015).

Conclusion

In this study, it is concluded that undergraduate nursing students frequently engage in the widespread adoption of self-medication practices. It can have significant implications for their health. Educational institutions must promote awareness about the potential dangers linked to the practice of self-administering medication and encourage accountable healthcare practices among nursing students.

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