

A STUDY TO ASSESS THE PREVALENCE AND PRACTICE OF SELF-MEDICATION WITH ANTIBIOTICS AMONG NURSING STUDENTS STUDYING AT SELECTED NURSING COLLEGE, JAIPUR.

Author's Name: Priya¹, Dr. Minaxi Vyas², Mrs. Anita Sharma³

Affiliation:

1. M.Sc. Nursing Student, Government College of Nursing, Jaipur, Rajasthan, India.
2. Nursing Lecturer, Government College of Nursing, Jaipur, Rajasthan, India.
3. Nursing Lecturer, Government College of Nursing, Jaipur, Rajasthan, India.

Corresponding Author Name: Priya, priyachaudhary19899@gmail.com.

ABSTRACT

Self-medication with antibiotics refers to the use of antibiotics without medical prescription for self-diagnosed conditions. It is commonly driven by convenience, prior experience, and easy access to drugs. METHODOLOGY: A descriptive cross-sectional research design was adopted to assess the prevalence and practice of self-medication with antibiotics among nursing students at a selected nursing college, Jaipur. The study included 200 B.Sc. Nursing students selected through proportionate sampling. Data were collected using a validated socio-demographic questionnaire and a 22-item Likert scale. The main study was conducted at Government College of Nursing, Jaipur from October 18 to November 02, 2025. Descriptive and inferential statistics were used for data analysis. RESULTS: The study findings revealed that the prevalence of self-medication with antibiotics was found to be 51%. Most students (76.47%) demonstrated a moderate level of practice of self-medication, with a mean practice score of 22.52 ± 6.09 , indicating an average tendency toward antibiotic self-use. Chi-square analysis showed a statistically significant association between the level of practice of self-medication and Year of Study and monthly family income at the 0.05 level of significance.

Keywords: Prevalence, Self-medication, Antibiotics, Practice of self-medication, nursing students.

INTRODUCTION

Antibiotic resistance is a silent epidemic. The inappropriate and excessive use of antibiotics is a primary driver of this global health emergency. While many campaigns focus on public education, there is a pressing need to ensure that healthcare students—future prescribers, dispensers, and educators—are trained in rational drug use. This need becomes even more critical when we consider nursing students, whose training involves direct patient care and medication administration.

The practice of self-medication with antibiotics among health science students, including nursing undergraduates, has emerged as a critical area of concern. These students, by virtue of their training, have partial medical knowledge and relatively easy access to drugs, which predisposes them to the misuse of antibiotics.

RESEARCH PROBLEM

A study to assess the prevalence and practice of self-medication with antibiotics among nursing students studying at selected nursing college, Jaipur.

OBJECTIVES:

1. To assess the prevalence of self – medication with antibiotics among nursing students at selected nursing college, Jaipur.
2. To assess the practice of self – medication with antibiotics among nursing students at selected nursing college, Jaipur.
3. To find out the association between practice of self – medication with antibiotics among nursing students with their selected demographic variables.

MATERIAL AND METHODS

A quantitative approach with a descriptive cross-sectional survey design was used, conducted at Government College of Nursing, Jaipur. A sample of 200 students was selected using proportionate stratified random sampling. Data were collected using a self-developed questionnaire and a Likert scale, which were validated by experts and found reliable (Cronbach's alpha = 0.773). A pilot study confirmed feasibility, and data collection was carried out through Google Forms with ethical considerations ensured. Data analysis included descriptive and inferential statistics, particularly the chi-square test to assess associations.

Description of Tool - Tool was divided into three sections:

- Section I: Socio Demographic Variables
- Section II: Prevalence of Self Medication with antibiotic
- Section III: Likert Scale to assess the level of practice of Self Medication with antibiotic

Each item had three alternatives varying from the response ‘Never’, ‘Sometimes’, ‘Always’. Each response carries a score of ‘0’, ‘1’, ‘2’, respectively. Responses were scored and categorized to determine whether the practice was excessive, moderate, or mild.

The total items were 22. Therefore 44 (2 x 22) is the maximum possible score and. The higher the value of the score, the more the practice of self medication and vice-versa.

TABLE NO 1: Distribution of score of Level of Practice

S.N.	Level of practice	Score	Percentage (%)
1	Mild practice	0-15	≤ 34
2	Moderate practice	16-30	35-70
3	Excessive practice	31-44	>70
	Total Score	44	100%

RESULTS

TABLE NO.- 2: Frequency and Percentage distribution of sample as per socio demographic variables
 (N=200)

S.N.	Socio Demographic variables		Frequency (F)	Percentage (%)
1	Age (Years)	17-19	38	19
		20-23	143	71.5
		24-27	19	9.5
2	Gender	Male	92	46
		Female	108	54
3	Year of Study	BSc. 1 st sem.	36	18
		BSc. 2 nd semester	44	22
		BSc. 4 th sem	41	20.5
		BSc. 5 th sem	38	19
		BSc. 4 th year	41	20.5
4	Family Income (monthly)	< RS. 30000	94	47
		RS. 30001- RS. 60000	74	37
		>RS. 60000	32	16
5	Area of Residence	Rural	112	56
		Semi- Rural	26	13
		Urban	62	31
6	Distance to nearest healthcare facility from present residence	<1KM	53	26.5
		1-5KM	122	61
		>5KM	25	12.5

Table No 2 represents the **distribution of study participants according to their socio-demographic characteristics**, including age, gender, year of study, family income, area of residence, and distance to the nearest healthcare facility.

TABLE NO.- 3 Frequency and Percentage distribution of prevalence of self – medication with antibiotics among B.Sc. Nursing students (N=200)

Prevalence	Frequency{ f }	Percentage %
Yes	98	49
No	102	51

Table No. 3 reveals the frequency and percentage of prevalence of self-medication among B.Sc. nursing students, in which the majority of students 102 (51%) had taken medicines without any prescription, while 98 (49%) students had not taken medicines without any prescription.

TABLE NO. 4 : Frequency and Percentage Distribution of Level of Practice of self – medication with antibiotics among B.Sc. Nursing students (N=102)

Sr. No.	Level of Practice (practice score)	Frequency{ f }	Percentage %
1	Mild practice (0-14)	12	11.76
2	Moderate practice (15-30)	78	76.47
3	Excessive practice (31-44)	12	11.76

Table no. 4 reveals the frequency and percentage distribution of the level of practice of self-medication with antibiotics among B.Sc. Nursing students, in which the majority of students 78 (76.47%) had a moderate level of practice, while 12 (11.76%) students each had mild and excessive levels of practice.

TABLE NO. 5: Mean, Mean Percentage, Mode, Median and Standard Deviation Of Level Of Practice Score Of Students (N=102)

S. No.	Maximum score	Mean	Mean percentage	Mode	Median	Standard Deviation
1	44	22.52	51.18%	22	25	6.097

Table No. 5 reveals that the maximum practice score was 44, with a mean score of 22.52, a mean percentage of 51.18%, and a standard deviation of 6.097, indicating a moderate variation in practice scores among the students around the mean.

TABLE NO. 6 : Association Between Level Of Practice and their Socio Demographic Variables. (N=102)

S. N.	Socio Demographic Variables	Categories	Frequency {F}	Level Of Practice			Chi Square	Tabulated Value (0.05 level of significance)	df	Inferences
				Mild	Moderate	Excessive				
1	Age (Years)	17-19	20	3	16	1	2.852	9.488	4	NS
		20-23	72	9	53	10				
		24-27	10	0	9	1				
2	Gender	Male	56	8	33	5	2.54	5.991	2	NS
		Female	46	4	45	7				
3	Year of Study	BSc. 1 st sem.	23	4	19	0	16.105	15.507	8	S

		BSc. 2 nd sem	18	3	15	0				
		BSc. 4 th sem	19	2	14	3				
		BSc. 5 th sem	22	1	14	7				
		BSc. 4 th year	20	2	16	2				
4	Family Income (monthly)	< RS. 30000	46	6	38	2	17.648	9.488	4	S
		RS. 30001- RS. 60000	39	4	32	3				
		>RS. 60000	17	2	8	7				
5	Area Of Residence	Rural	55	7	38	10	5.759	9.488	4	NS
		Semi-Rural	14	1	13	0				
		Urban	3	4	27	2				
6	Distance to nearest healthcare facility from present residence	<1KM	27	3	24	0	8.658	9.488	4	NS
		1-5KM	63	7	44	12				
		>5KM	12	2	10	0				

Note- **df**: degree of freedom, **S** : Significant **NS** : Not significant

Table number 4 revealed that there was a significant association found between level of practice of self-medication with medication with selected socio – demographic variable, i.e. education level, ($\chi^2=16.105$), and family income (monthly) ($\chi^2=17.648$) at 0.05 level of significance. Hence the Researcher was able to rejected null hypothesis and the research hypothesis was accepted.

There was no significant association found between the level of practice of self-medication with medication with selected socio – demographic variable, i.e. age-in years ($\chi^2=2.852$), gender ($\chi^2=2.54$), area of residence ($\chi^2=5.759$), distance to nearest healthcare facility from present residence ($\chi^2=8.658$),

at 0.05 level of significance. Hence researcher fails to reject the Null Hypothesis.

DISCUSSION

The study highlights that self-medication with antibiotics is prevalent among nursing students, with most demonstrating a moderate level of practice. These findings emphasize the urgent need to promote rational use of antibiotics to prevent misuse and the growing threat of antimicrobial resistance. Strengthening education on appropriate antibiotic use and enforcing stricter regulations are essential to ensure safe and responsible practices.

CONCLUSION

Based on these findings, the **null hypotheses were rejected** for Year of Study and monthly family income, while the **null hypotheses were accepted** for the remaining socio-demographic variables. The study emphasizes the need for **targeted educational interventions** focusing on rational antibiotic use, particularly considering students' educational background and socioeconomic status, to reduce inappropriate self-medication practices among nursing students.

REFERENCES

1. Badiger S, Kundapur R, Jain A, Kumar A, Pattanshetty S, Thakolkaran N, et al. Self-medication patterns among medical students in South India. *Australas Med J.* 2012 Apr 30;5(4):217–20.
2. Banerjee I, Bhadury T. Self-medication practice among undergraduate medical students in a tertiary care medical college, West Bengal. *J Postgrad Med.* 2012;58(2):127–31.
3. Chaudhary V, Kumari S, Sharma B, Ahuja C, Kishore H, Pal B. Prevalence and patterns of self-medication practices in India: A systematic review and meta-analysis. *Medical Journal Armed Forces India [Internet].* 2024 Dec 19
4. Chindhalore CA, Dakhale GN, Giradkar AB. Comparison of self-medication practices with analgesics among undergraduate medical and paramedical students of a tertiary care teaching institute in Central India - A questionnaire-based study. *J Educ Health Promot.* 2020;9:309.
5. Gashaw T, Yadeta TA, Weldegebreal F, Demissie L, Jambo A, Assefa N. The global prevalence of antibiotic self-medication among the adult population: systematic review and meta-analysis. *Systematic Reviews.* 2025 Feb 26;14(1):49.



6. Ghodkhande KP, Choudhari SG, Gaidhane A. Self-Medication Practices Among the Geriatric Population: A Systematic Literature Review. *Cureus*. 2023 Jul;15(7):e42282.
7. Honnekeri A, Bhavshaikh N, Shah M, Nayak U. Self-medication in medical students in urban India: Exploring the extent of this dangerous practice. *J Family Med Prim Care*. 2024 Aug;13(8):3381–7.
8. Joseph N, Jain J. Perception and Practices of Self-medication Practices among Health Science Students during the ongoing COVID-19 Pandemic in Mangalore, India. *Curr Drug Saf*. 2024;19(1):70–81.