

## SCENARIO OF USING BOTH OTC AND PRESCRIPTION MEDICINE WITHOUT THE HELP OF HEALTHCARE PROFESSIONALS AND ABUSE OF MEDICINE IN RANDOMLY SELECTED POPULATION IN DHAKA CITY

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### Abstract

Always medicines should be, literally must be used according to the suggestion of healthcare professionals. In Bangladesh, most kind of drugs including prescription drugs are available to the consumers without any prescription. Which increase the percentage of drug resistance also. The main purpose of this survey study was to collect data regarding the use of OTC and prescription drugs and get an overall overview regarding the percentage of people taking those medicines without consulting Health care professionals in Bangladesh. About 500 volunteers participated in this survey. Among them almost 96% of volunteers using medicine without prescription or any suggestion from healthcare professionals. This percentage is very alarming for the Bangladesh situation.

**Keywords:** Prescription, OTC, Antibiotics, NSAID, Drug Resistance.

## Introduction

The drug is any chemical you take that affects the way your body works. Alcohol, caffeine, aspirin, and nicotine are all drugs. A drug must be able to pass from your body into your brain. Once inside your brain, drugs can change the messages your brain cells are sending to each other, and the rest of your body. They do this by interfering with your brain's own chemical signals: neurotransmitters that transfer signals across synapses. Inappropriate use of drugs can be classified into either 'abuse'; typically defined as the use of a medication for nonmedical purpose or 'misuse' which is the use of medications for a legitimate medical reason, yet in ways other than as directed, in most cases by alteration of either dose or duration of use.

The main mission of this survey study was to collect data regarding the use of OTC and prescription drugs and get an overall overview regarding the percentage of people taking those medicines without consulting Health care professionals in Bangladesh. A specific area of Dhaka city was selected for collecting data. The participated volunteers were from a different age, sex, occupation, and education level. The questionnaire survey method was used for this research work. This study adopted a cross-sectional survey methodology using a self-developed anonymous questionnaire.

The main purpose of this survey study was to identify the percentage of people who are using a drug without a prescription and the percentage of the people who abused the drug. Including some other factors like, for which disease peoples take more drug without a prescription, Who or what influence people most for taking the drug without a prescription, The percentage of the people who complete the dose of the drug when he/she takes by themselves, etc..

## Methodology

This is the study which was based on a survey on misuse of medicine of both kinds of OTC and Prescription medicine and possible rate of medicine abuse. To collect data, a cross-sectional and random sampling method was applied. The study was

carried out in Dhaka in the month of November 2018. Randomly 468 people were selected. A designed questionnaire [Figure-1] was filled by the volunteers to collect information about their misuse and abuse experience of drug. After collecting all data, are put into MS Excel 2016 sheet [Figure-2]. From there by using different kind of ratio chart results were found out.

## Result and Discussion

### Gender

In this project, there are 468 volunteers are participated. Among them 223 were male and rest 245 were female [Figure-3, Table-1]

### Education level

This project was done with people from a different place. Some of them were students, some were employs, some were day laborer, among female some were housewives. Education was one of the major factors for this project. Among these people were from different education level. I divided the education level into four major groups. They are; primary, secondary, undergraduate and graduate. Around 32 people were from primary level and another 32 from the secondary level. 367 people that means the major number of people were from the undergraduate level. Some of them were running student, some were already completed. And rest of 37 people were from graduation level. [Table-2], [Figure-4]

### Have volunteers used drug without prescription?

Among these people, 448 people are using different kind of medicine without taking suggestion of any healthcare professional or prescription. And 20 people don't take medicine without prescription. [Table-3], [Figure-5]

It seems that almost 96% are using medicine without a prescription. Which is very worrying for Bangladesh situation

### For which disease, you take the drug without prescription most?

People take drug for different disease. But gastric, fever, headache was common for most of the

people. About 166 persons are taking medicine for gastric problem. 113 people for fever and 89 for headache most. Besides this about 40 people taking medicine for pain, 13 people for diarrhea, 12 for cold and 17 people for other diseases like the sleeping problem, etc.

One person takes medicine for gastric that doesn't mean he/she didn't take others medicine. He/she also take medicine for another disease. Some people take several medicines at a time without any prescription. [Table-4], [Figure-6]

#### **How frequently, people used medicine?**

Almost 60% of people take medicine occasionally. About 107 among this volunteer use to with different medicine frequently. They take several doses of medicine without prescription almost like daily routine. Only 99 people among these people take medicine rarely in case like very emergency or some kind of this. [Table-5], [Figure-7]

#### **From whom people got information about the drug?**

One common question may rise form where or who insist them to take medicine without the suggestion of any healthcare professionals or any prescription. It seems in this project; family personal is mainly most responsible for this occurrence. Among these volunteer 48% personals are insist by family to take medicine. After this, some personal are responsible for their own self. Like they were prescribed before for a disease. After a long if they feel like facing same problem as before they started to take medicine from previous prescription. For a single moment they don't feel, it could be dangerous or can cause health hazard.

Those personals who worked in retail pharmacy shop, they are also responsible for insisting people to take medicine. Very few percents of people got information about drug from their friends or others known personal. [Table-6], [Figure-8]

#### **Have the people known about the dose?**

There is another question, though lots of people take medicine without any prescription but how many of them have knowledge about the drug or about the dosage of that drug. In this case, about 288 thought they know about the drug they have taken. And 160 people taking drug without knowing any information about the drug. [Table-7], [Figure-9]

#### **How do people know these drugs?**

Most of the people know the drug by their brand name. The percentage of these kinds of people is about 63%. About 89 (20%) people know drug with their generic name. 76 person taking medicine they don't know even the name of medicine. Most of case they get medicine from shop or provided by other personal like family member. [Table-8], [Figure-10]

#### **Why do you use drugs without prescription?**

Why people take medicine without any suggestion from healthcare. What's the main reason behind this? Most of the volunteer of this project informed that they take medicine by their own self to get quick remedy. Almost 338 of these volunteers agreed with it. About 29 people informed that they want to take suggestion from doctor but they don't have time. About 77 people can't take suggestion from doctor because of their high fee. [Table-9], [Figure-11]

#### **Do you think drugs without prescription curing your specific disease?**

When people take medicine on their own, are those medicine worked properly? Are those drug really helpful to get relief from their disease? The volunteers of this project informed that those medicine what they take are not working all the time. And about 294 confirmed this. About 132 people get relief after taking medicine. 32 people don't get any relief but still they take medicine without prescription. [Table-10], [Figure-12]

**Have you felt sick any time after taking a drug without a prescription?**

After taking medicine by own (without a prescription) about 85 volunteers felt or got sick at different times. Here the worrying matter is after being sick they still continuing to taking medicine. Others 363 volunteer didn't get sick because of taking drug on their own. [Table-11], [Figure-13]

**Did you abuse drug anytime?**

Abuse of the drug is also a worrying subject for Bangladesh in current situation. About 32 people among the volunteers of this project mean almost 8% of total abused drug in previous time. This is not a small number among these people. 92% people didn't abuse drug anytime in their life. [Table-12], [Figure-14]

**Did you suggest anyone for taking the drug without prescription ever?**

Most of the volunteers of these project are the victim. The reason for calling them victim because they already have started harming themselves by taking medicine without prescription. 239 (almost 32%) volunteer insist others take medicine without help of any doctor or other healthcare professionals. Rest 229 didn't suggest drug for others. [Table-13], [Figure-15]

**Do you complete your dose when you take the drug without a prescription?**

To get proper effect from a drug it's mandatory to complete the dose of that drug. Here, there was a question to determine, how many of those volunteers who were taking the drug without prescription, completing their dose. 211 volunteer took drug but they didn't complete the dose anytime. Which lead them to the resistance of drug. Some of these volunteers, about 174 volunteer complete dose but not every time. Only 63 people complete full dose of drug whenever they took medicine. [Table-14], [Figure-16]

**Have you taken the antibiotic drug without prescription?**

Antibiotic is one of the highest classes of medicine among different drugs. In case of being specific for antibiotic drug, 426 volunteers took antibiotic without taking any suggestion from any healthcare professionals. Though 448 people among the volunteers taking a different drug, only 22 of them don't take the antibiotic. In total 42 persons don't take antibiotic without prescription. [Table-15], [Figure-17]

**Do you know about the dose of Antibiotic?**

Among these volunteers, some of them know about the normal drug dose but in terms of antibiotic how many of them know about antibiotic dose. Only 236 volunteers know about antibiotics' dose. Others 232 people don't know. Still, they take the antibiotic drug. [Table-16], [Figure-18]

**From where you get knowledge about antibiotics?**

Though in general terms family members were responsible for taking drugs without prescription. But Retail shop personals and the victims by own self are responsible for antibiotic administration. 146 person insist by retail pharmacy and another 146 people taking antibiotic by following the previous prescription. 122 people take antibiotics by the suggestion of their family members. 12 people from their friends or another known person. [Table-17], [Figure-19]

**Did you complete the dose in time of taking antibiotic?**

The percentage of completing dose of antibiotics is a little bit higher than normal medicines. About 164-person complete dose properly. Another 164 people complete but not all times. Among these volunteers, 98 people didn't complete the antibiotic dose whenever they took those medicine. [Table-18], [Figure-20]

**Conclusion**

After seeing this survey result one thing is assured that the people of Bangladesh are at high risk of

drug resistance and here, 90% of people among 500 are using every kind of medicine without thinking about the dose or side effect. Most of these volunteers are educated. Then the condition of the rural area can be assumed easily. Family members and retail sellers are mainly responsible for this situation. This is the high time to take care of this situation with more seriously. If once medicines are starting to resist it will cause irreparable damage to the healthcare system.

## Reference

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**Table-01:** Number of Male and Female.

MALE	FEMALE
223	245

**Table -02:** Education level of volunteers.

PRIMARY	SECONDARY	UNDERGRADUATE	GRADUATE
32	32	367	37

**Table-03:** Number of people using medicine with or without prescription.

YES	NO
448	20

**Table-04:** Diseases, for which peoples take medicine more.

FEVER	GASTRIC	DIARRHEA	COLD	HEADACHE	PAIN	OTHERS
113	166	13	12	89	40	17

**Table-05:** Frequency of using the medicine.

OFTEN	SOMETIMES	RARE
107	242	99

**Table-06:** Source of Information about medicine.

FAMILY	FRIEND	PREVIOUS PRESCRIPTION	RETAIL SHOP
215	26	110	95

**Table-07:** People has knowledge about medicine or not.

YES	NO
288	160

**Table-08:** People knew drugs in which terms.

BY GENERIC NAME	BY BRAND NAME	BY HELP OF SHOPKEEPER
89	283	76

**Table-09:** Why people use the drug without prescriptions.

DOCTOR FEE IS HIGH	LACK OF TIME	QUICK REMEDY
77	29	338

**Table -10:** Are these drugs working properly.

YES	NO	NOT ALWAYS
122	32	294

**Table-11:** Volunteers Fall in sick after administration of the drug.

YES	NO
85	363

**Table-12:** How many people abuse drug.

YES	NO
38	430

**Table-13:** How many of these volunteers suggests drug for others.

YES	NO
239	229

**Table-14:** How many of these volunteers completed dose.

YES	NO	SOMETIMES
63	211	174

**Table-15:** How many people using antibiotic.

YES	NO
426	42

**Table-16:** How many people know about antibiotic.

YES	NO
236	232

**Table-17:** People get knowledge about antibiotic from which source.

FAMILY	FRIEND	PREVIOUS PRESCRIPTION	RETAIL SHOP
122	12	146	146

**Table 18:** Number of the volunteer completed a dose for the antibiotic.

YES	NO	SOMETIMES
164	98	164



Figure-01: Question Model.

## Questionnaire survey

**Use of drug without prescription:**

Age:		Gender: MALE / FEMALE	
Educational Background:			
Primary	Secondary	Undergraduate	Graduate

1. Have you used drug without prescription?
 

☐ YES
 ☐ NO
2. For which disease, you take drug without prescription most?
 

☐ FEVER
 ☐ GASTRIC
 ☐ DIARRHEA
 ☐ COUGH-COLD
 ☐ HEADACHE
 ☐ PAIN
 ☐ OTHERS ( \_\_\_\_\_ )
3. Which medicine you take most?
 

☐ \_\_\_\_\_
4. How frequently do you use?
 

☐ OFTEN
 ☐ SOMETIMES
 ☐ RARE
5. From whom you get information about drug?
 

☐ FAMILY MEMBERS
 ☐ FRIENDS
 ☐ PREVIOUS PRESCRIPTION
 ☐ RETAIL SHOP
6. Do you have the knowledge about the dose?
 

☐ YES
 ☐ NO
7. How do you know these drugs?
 

☐ BY GENERIC NAME
 ☐ BY BRAND NAME
 ☐ BY THE HELP OF SHOPKEEPER



8. Why do you use drugs without prescription?

☐ DOCTOR FEE IS HIGH      ☐ LACK OF TIME      ☐ QUICK REMEDY

9. Do you think drugs without prescription curing your specific disease?

☐ YES      ☐ NO      ☐ NOT ALWAYS

10. Have you felt sick any time after taking drug without prescription?

☐ YES      ☐ NO

11. Did you abuse drug anytime?

☐ YES      ☐ NO

12. Did you suggest anyone for taking drug without prescription ever?

☐ YES      ☐ NO

13. Do you complete your dose when you take drug without prescription?

☐ YES      ☐ NO      ☐ SOMETIMES

14. Have you take antibiotic drug without prescription?

☐ YES      ☐ NO

15. For which disease you take antibiotic?

☐ FEVER      ☐ COLD      ☐ DIARRHEA      ☐ OTHERS ( \_\_\_\_\_ )

16. Do you know about the dose of Antibiotic?

☐ YES      ☐ NO

17. From where you get knowledge about antibiotics?

☐ FAMILY      ☐ FRIEND      ☐ SHOPKEEPER      ☐ PREVIOUS HISTORY

18. Did you completed the dose in time of taking antibiotic?

☐ YES      ☐ NO      ☐ SOMETIMES

Figure-02: MS Excel Sheet.

Survey Result Compilation - Excel															
File Home Insert Page Layout Formulas Data Review View Tell me what you want to do...															
Clipboard Font Paragraph Alignment Number Styles Cells Editing															
RES															
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6		Use of drug without prescription													
7		Survey Entry	1	2	3	4	5	6	7	8	9	10	11	12	13
8		Age	21	22	21	20	22	20	20	20	20	20	20	22	20
9		Gender	FEMALE	MALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	FEMALE	MALE	MALE	FEMALE	FEM
10		Educational Background	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Undergrad	Unc
11	Q1	Have you used drug without prescription?	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES
12	Q2	Which medicine you take most?	Paracetamol	paracetamol	napa extrasec	napa extrasec	napa extrasec	napa extrasec	napa extrasec	napa extrasec	napa extrasec	napa extrasec	paradol	paracetamol	napa extrasec
13	Q3	For which disease, you take drug without prescription most?	FEVER	HEADACH	PAIN	HEADACH	GASTRIC	HEADACH	FEVER	FEVER	FEVER	FEVER	FEVER	HEADACH	PAIN
14	Q4	How frequently do you use?	SOMETIM	OFTEN	RARE	SOMETIM	SOMETIM	SOMETIM	SOMETIM	SOMETIM	SOMETIM	SOMETIM	RARE	SOMETIM	RARE
15	Q5	From whom you get information about drug?	PREVIOUS	FAMILY M	FRIENDS	FAMILY M	PREVIOUS	FAMILY M	PREVIOUS	FAMILY M	PREVIOUS	FAMILY M	RETAIL SH	FAMILY M	FAMILY M
16	Q6	Do you have the knowledge about the dose?	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
17	Q7	How do you know these drugs?	BY THE HE	BY GENER	BY BRAND NAME	BY BRAND	BY BRAND	BY BRAND	BY BRAND	BY BRAND	BY BRAND	BY BRAND	BY THE HE	BY GENER	BY BRAND
18	Q8	Why do you use drugs without prescription?	QUICK RE	QUICK RE	DOCTOR FEE IS HIGH	QUICK RE	DOCTOR F	QUICK RE	QUICK RE	QUICK RE	QUICK RE	QUICK RE	QUICK RE	DOCTOR F	QUICK RE
19	Q9	Do you think drugs without prescription curing your specific disease?	NOT ALW	NOT ALW	NOT ALWAYS	YES	NOT ALW	NOT ALW	NOT ALW	NOT ALW	NOT ALW	NOT ALW	NOT ALW	NO	NOT ALW
20	Q10	Have you felt sick any time after taking drug without prescription?	YES	YES	NO	NO	NO	NO	YES	YES	NO	YES	YES	YES	NO
21	Q11	Did you abuse drug anytime?	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
22	Q12	Did you suggest anyone for taking drug without prescription ever?	NO	YES	YES	NO	YES	YES	NO	NO	NO	NO	NO	YES	NO
23	Q13	Do you complete your dose when you take drug without prescriptio	YES	NO	SOMETIMES	SOMETIM	NO	YES	SOMETIM	SOMETIM	NO	SOMETIM	SOMETIM	SOMETIM	SOM
24	Q14	Have you take antibiotic drug without prescription?	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	YES	YES	YES
25	Q15	Do you know about the dose of Antibiotic?	YES	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
26	Q16	From where you get knowledge about antibiotics?	FAMILY		FRIEND				PREVIOUS	FAMILY	SHOPKEE	SHOPKEE	SHOPKEE	FAMILY	PRE
27	Q17	Did you completed the dose in time of taking antibiotic?	SOMETIMES		SOMETIMES				YES	SOMETIM	NO	SOMETIM	YES	NO	SOM
28															

Figure-03: Percentage of Male and Female.

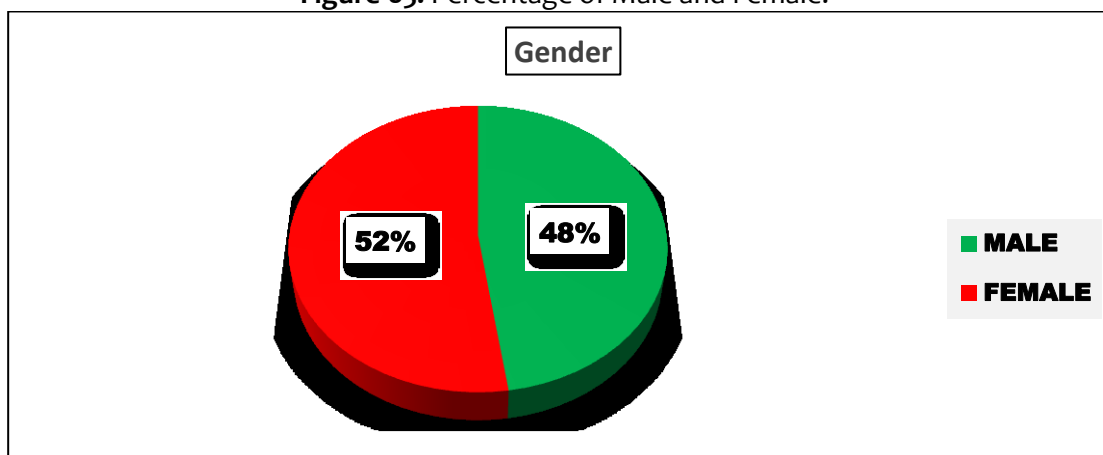


Figure-04: Education level of volunteers.

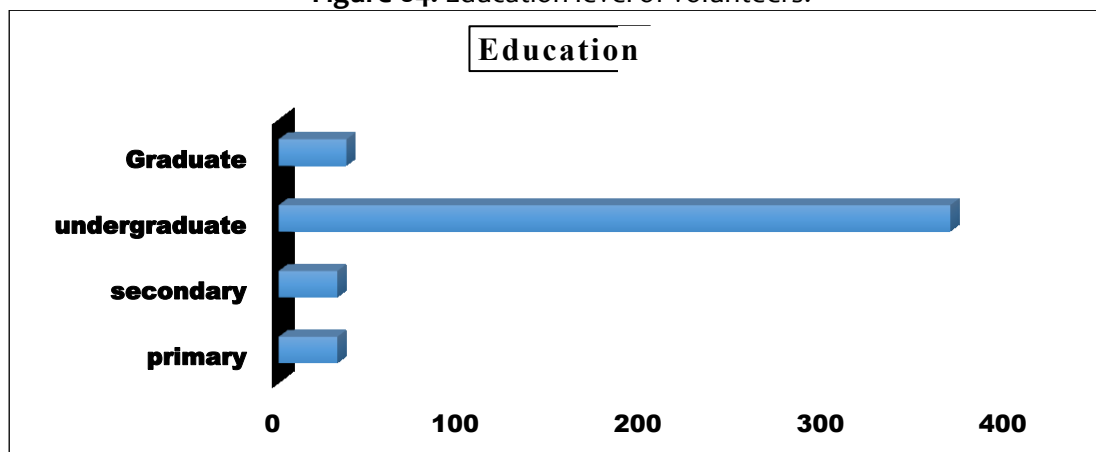


Figure-05: Number of people using medicine with or without prescription.

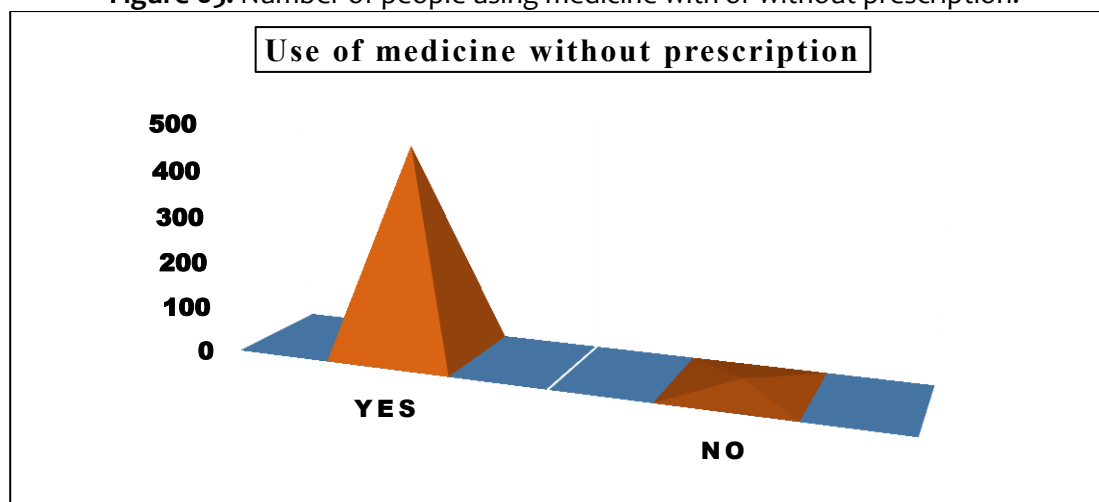


Figure-06: Diseases, for which peoples take medicine more.

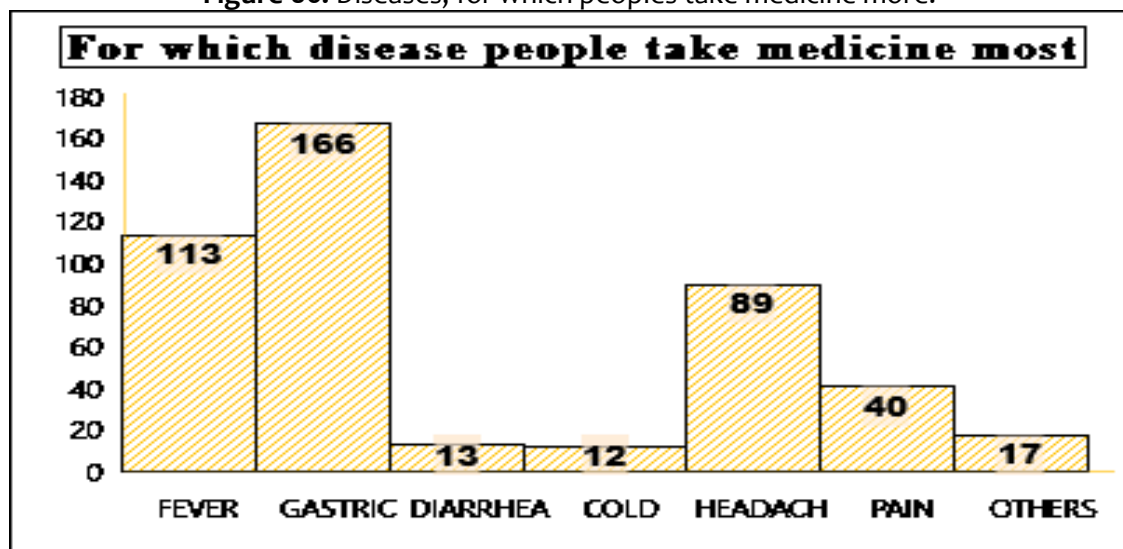


Figure-07: Frequency of using medicine.

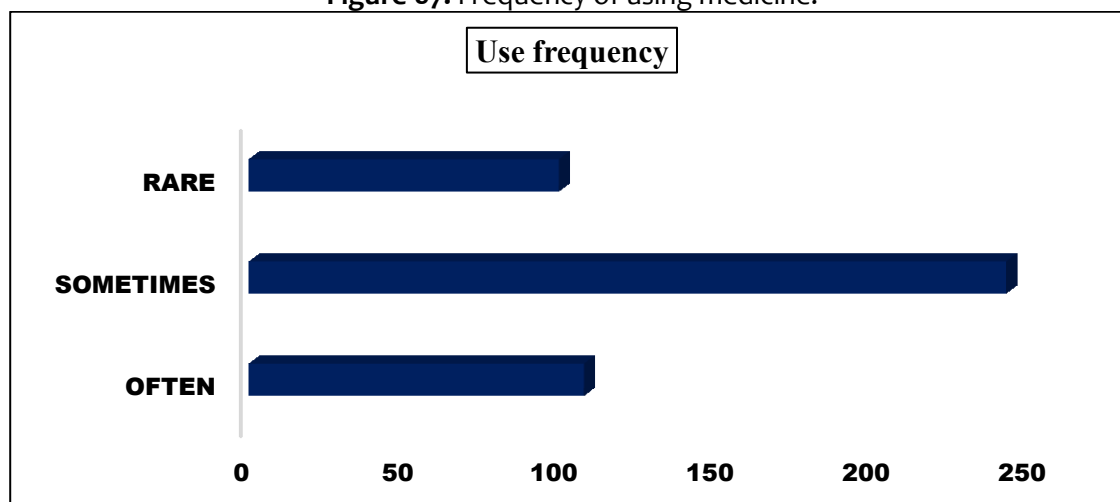


Figure-08: Source of Information about the medicine.

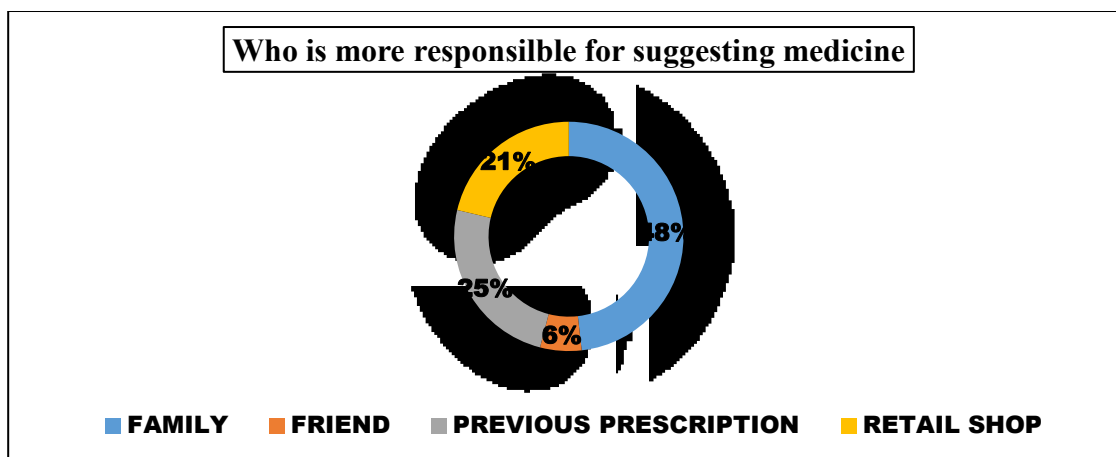


Figure-09: People has knowledge about medicine or not.

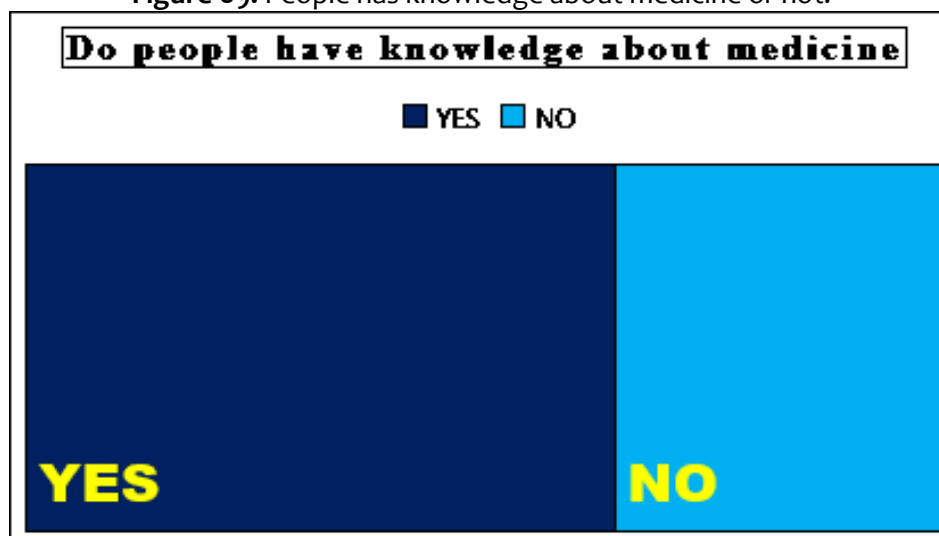


Figure-10: People knew drugs in which terms.

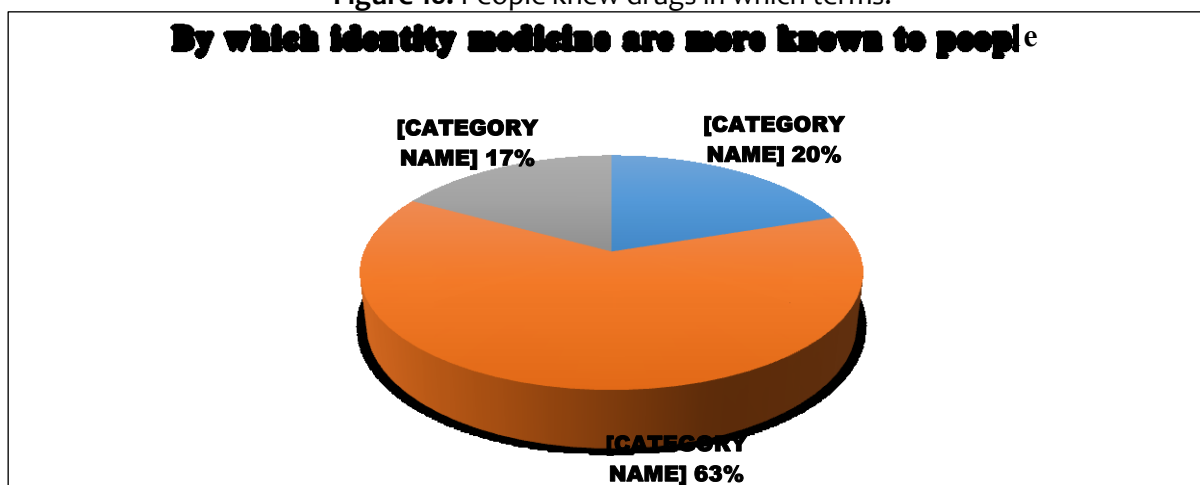


Figure-11: Why people use drug without prescriptions.

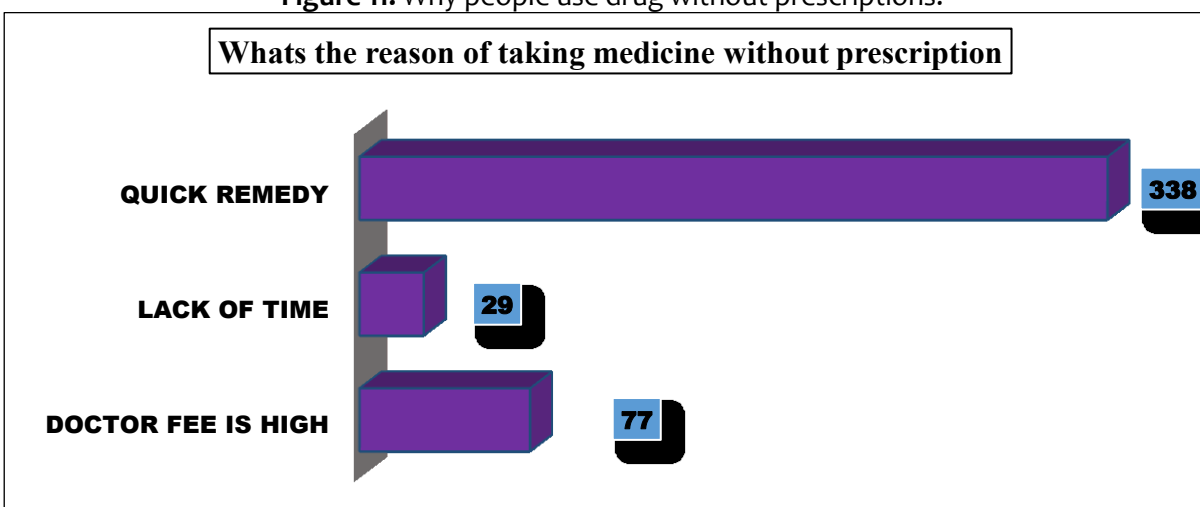


Figure-12: Drugs working properly for how many volunteers.

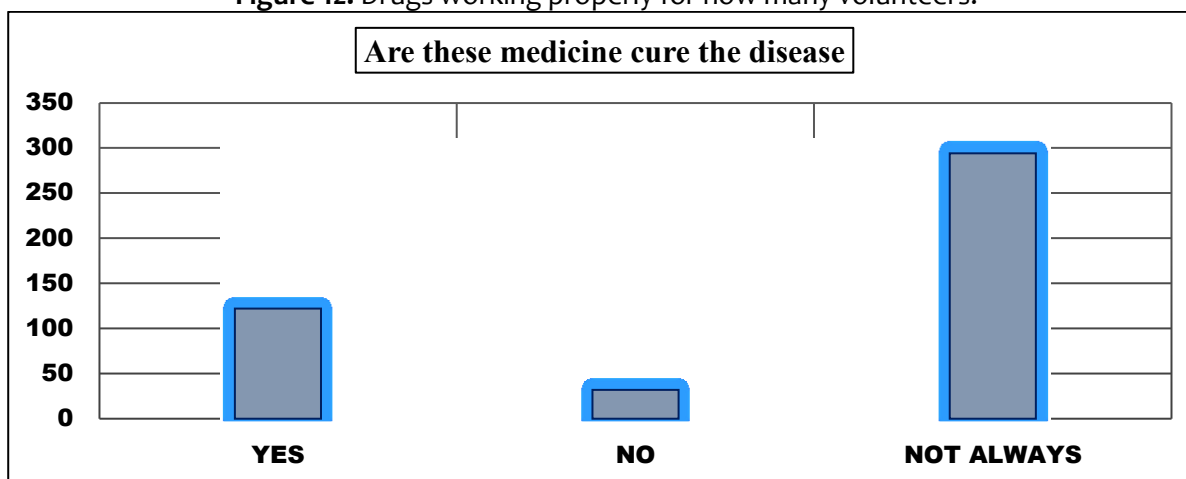


Figure-13: Number of volunteer fall in sick after administration of drug.

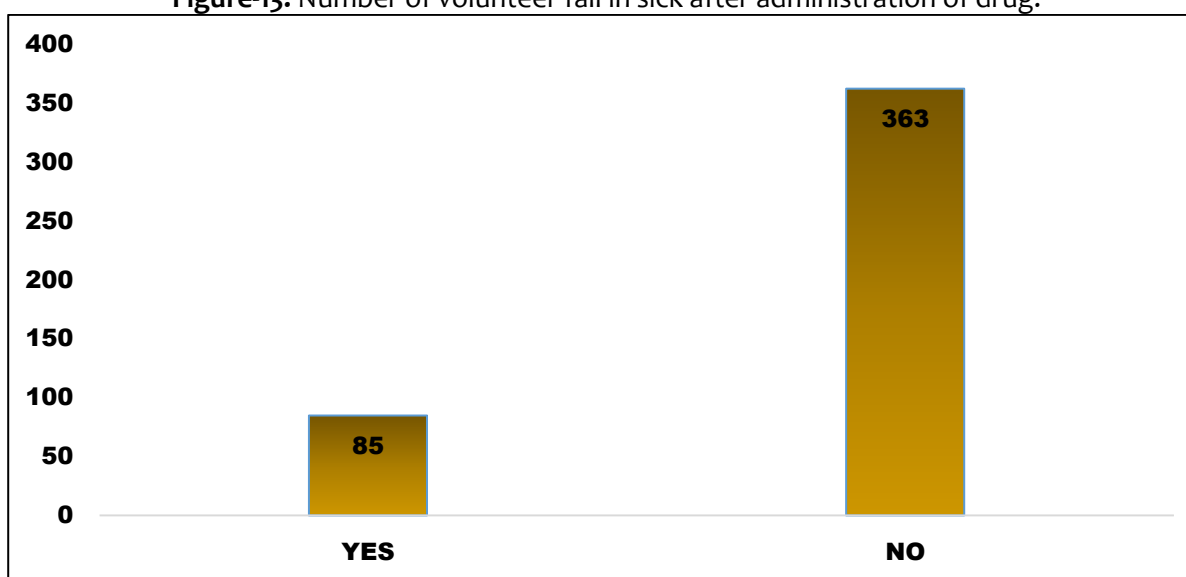


Figure-14: How many among these volunteers abuse drug.

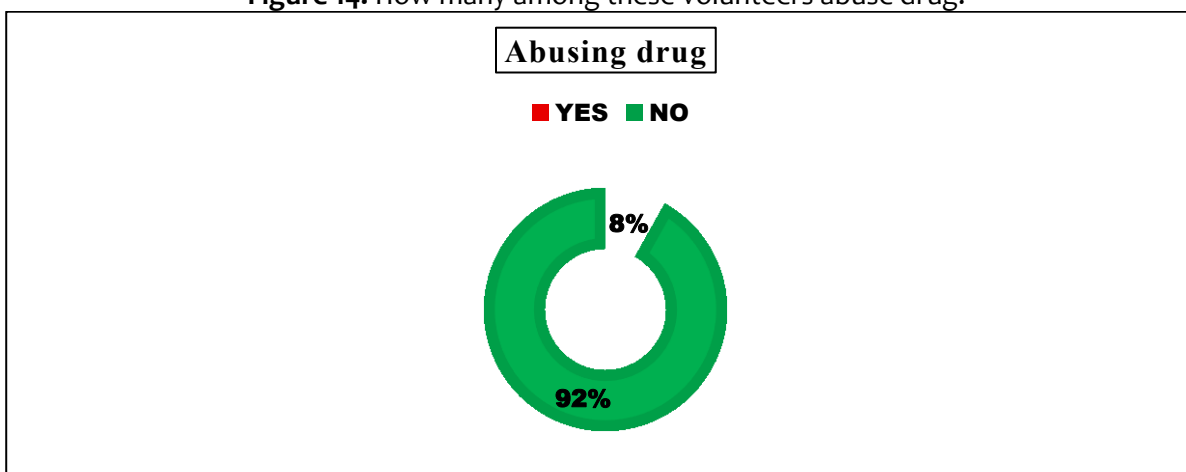


Figure-15: How many of these volunteers suggests drug for other.

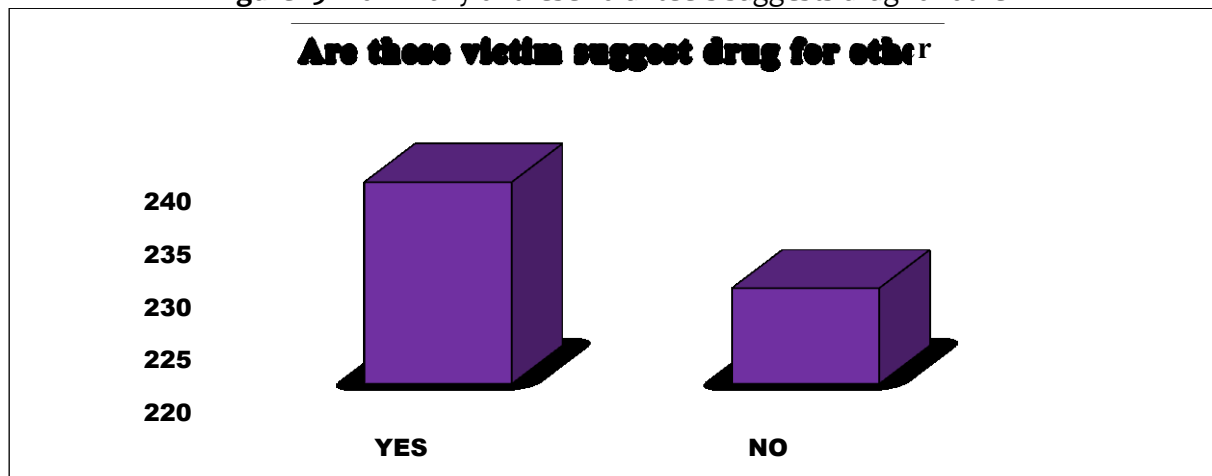


Figure-16: Number of these volunteer who completed dose.

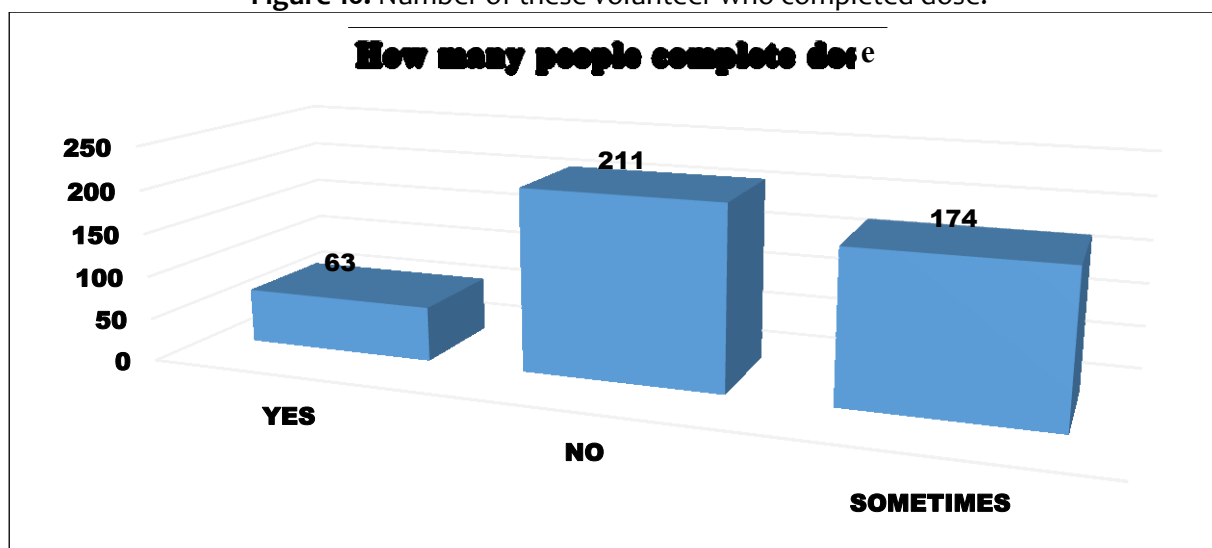




Figure-17: Number of people using antibiotic.

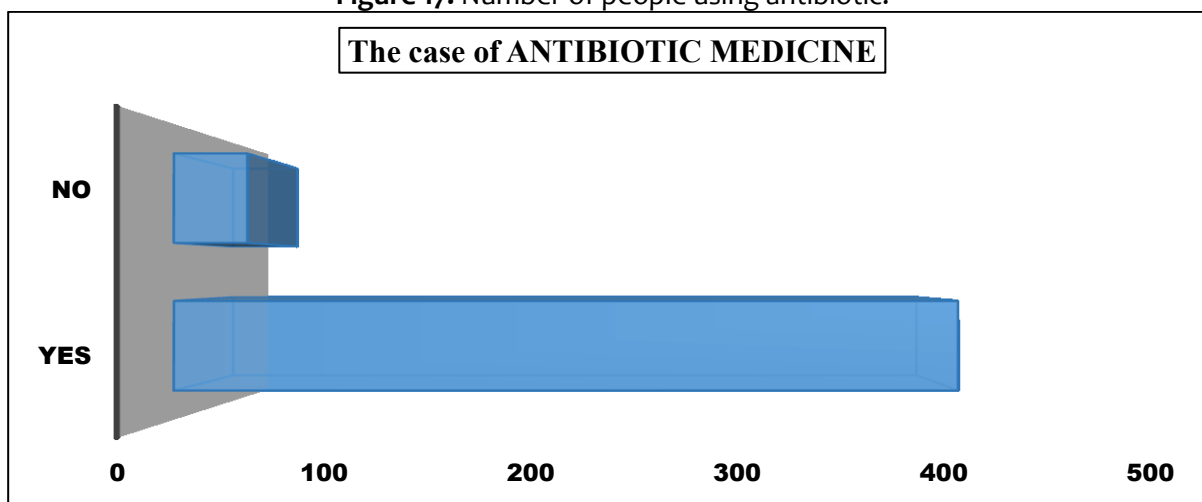


Figure-18: How many people know about antibiotic.

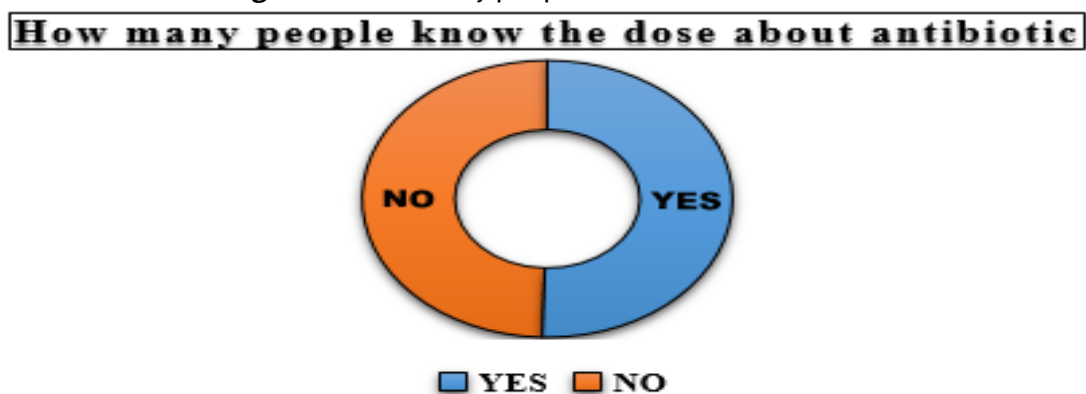
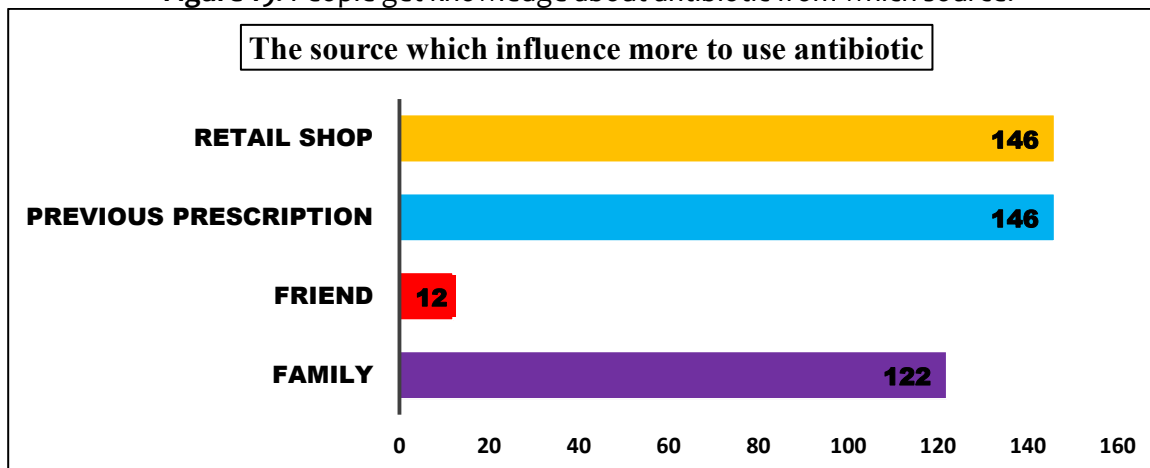


Figure-19: People get knowledge about antibiotic from which source.



**Figure-20:** Number of the volunteer completed dose for antibiotic or not.

