# A study on self-medication with antibiotics amongst the employees of a consulting firm, Gurgaon

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# INTRODUCTION

- Self-medication is the consumption of drugs, usually for common health problems, without a prescription from a registered physician

- In countries like India , Bangladesh etc., where universal access to healthcare is still to be accomplished, self-medication is a very regular way for seeking relief from health-related issues

- Despite the benefits of antibiotics, their injudicious use (due to economic factors, lack of physicians, immediate relief, healthcare policies regarding medical insurance etc.) gave way to antibiotic resistance posing a serious threat to public health

- Drug resistance can have various disastrous effects like extended period of sickness which will lead to increased frequency of doctor visits, hospital stay causing out of pocket expenditure due to in-stay and medication and in the worst case, death.

- The LMICs with highest consumption of antibiotics in 2015 were India, China and Pakistan. The HICs with highest consumption in 2015 were the US, France and Italy

# METHODOLOGY

**Aim** : To study the pattern and prevalence of self-medication with antibiotics in the employees of a consulting firm in Gurgaon, Haryana

**Objectives** :

- To assess the self-medication pattern in educated people working for a pharmaceutical consulting firm
- To assess the prevalence of self-medication with antibiotics amongst employees of a pharmaceutical consulting firm

**Methodology**

Study Design: A descriptive, quantitative study

Study Area: A consulting firm of Gurgaon, Haryana.

Study Period: Three months (February 2019- May 2019)

Sample Size: 200 employees

Sampling Technique: Convenience Sampling

Study Tool: Questionnaire developed on Google forms

Data Collection: Email (Google forms)

Exclusion Criteria: Pharmacist and MBBS doctors

Out of 150 who responded, 17 were either pharmacist or MBBS doctors so their responses were dropped. A total of 133 responses were analyzed in the end

# FINDINGS

| Table 1. Sociodemographic characteristics on self-medication use (n=133) | | | |
|---|---|---|---|
| | | Self-medicated | Did not self-medicate |
| Sex | Male | 45 | 15 |
| | Female | 58 | 15 |
| Highest Education | Graduation | 31 | 9 |
| | Post Graduatic | 68 | 21 |
| | PhD | 4 | 0 |
| Age | Less than 25 | 21 | 5 |
| | 26-35 years | 77 | 24 |
| | More than 35 | 5 | 1 |

The prevalence of self-medication was

- 75 % amongst male while it was almost 80% amongst females.
- highest amongst the PhD scholars (100%) amongst the respondents, followed by graduates (77.5%) and finally the post graduates (76.4%).
- highest in age group of more than 35 years (83.33%), followed by those who were less than 25 years (80.7%)

| Table 2 Crosstabulation (Highest educational qualification * Frequency) | | | | | |
|---|---|---|---|---|---|
| | | How many times did you self-medicate the antibiotics in the last one year? | | | |
| | | 1-2 time | 3-4 time | >5 | Didn't self-medicate |
| Highest educational qualification | Graduation | 21 (15.7) | 7 (5.2) | 3(2.2) | 9 (6.7) |
| | Post Graduation | 53 (39.8) | 12 (9) | 3(2.2) | 21 (15.7) |
| | PhD | 3(2.2) | 0 | 1 (0.7) | 0 |
| Total | | 77 | 19 | 7 | 30 |

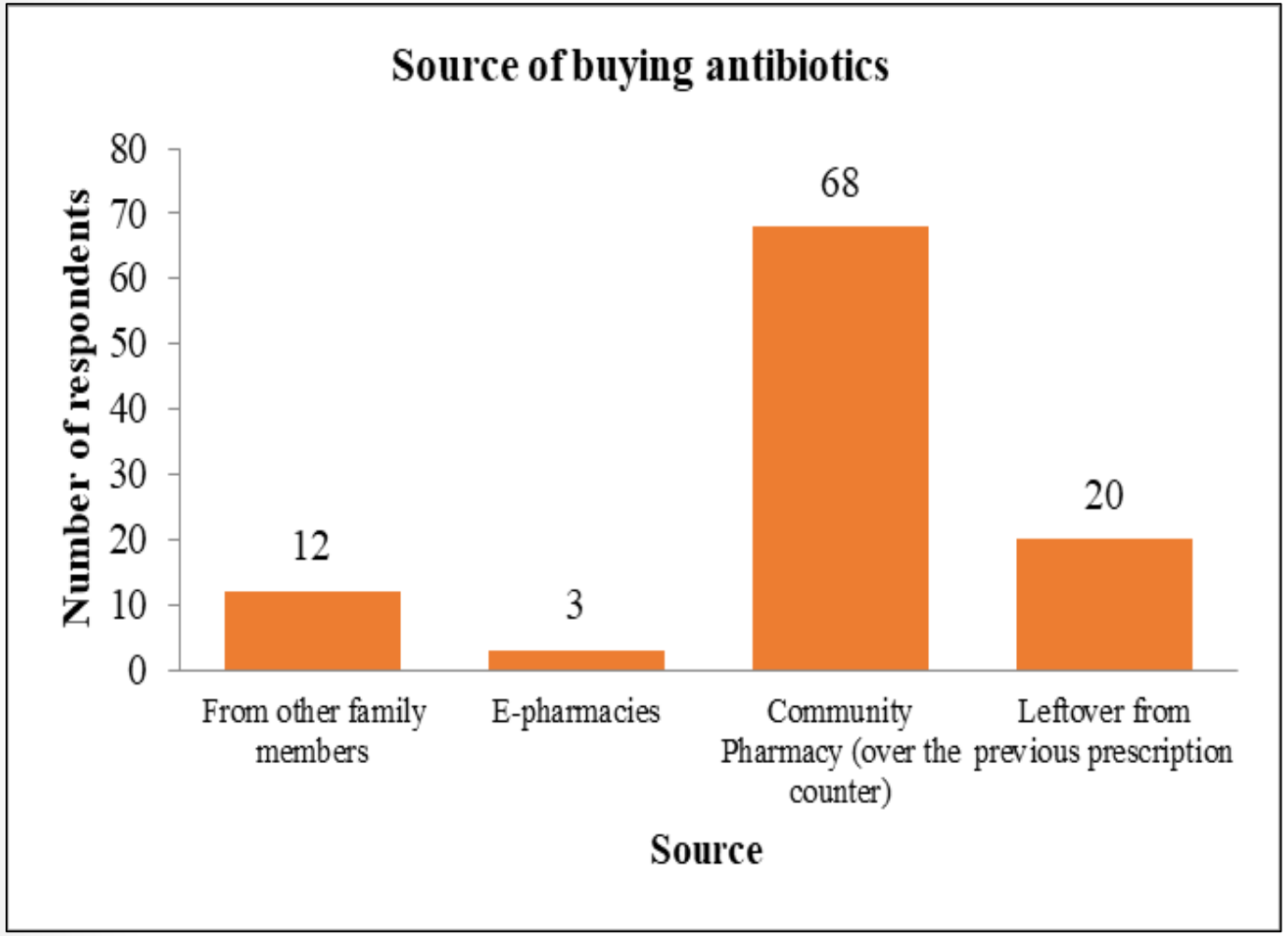
Almost 67% respondents were postgraduates while graduates were 30%.

Around 77% had self-medicated with ATB at least once in the last year

25% of PhD scholars had self-medicated more than 5 times with antibiotics in the past year followed by 10% of graduates who self-medicated more than 5 times with antibiotics in the past year.

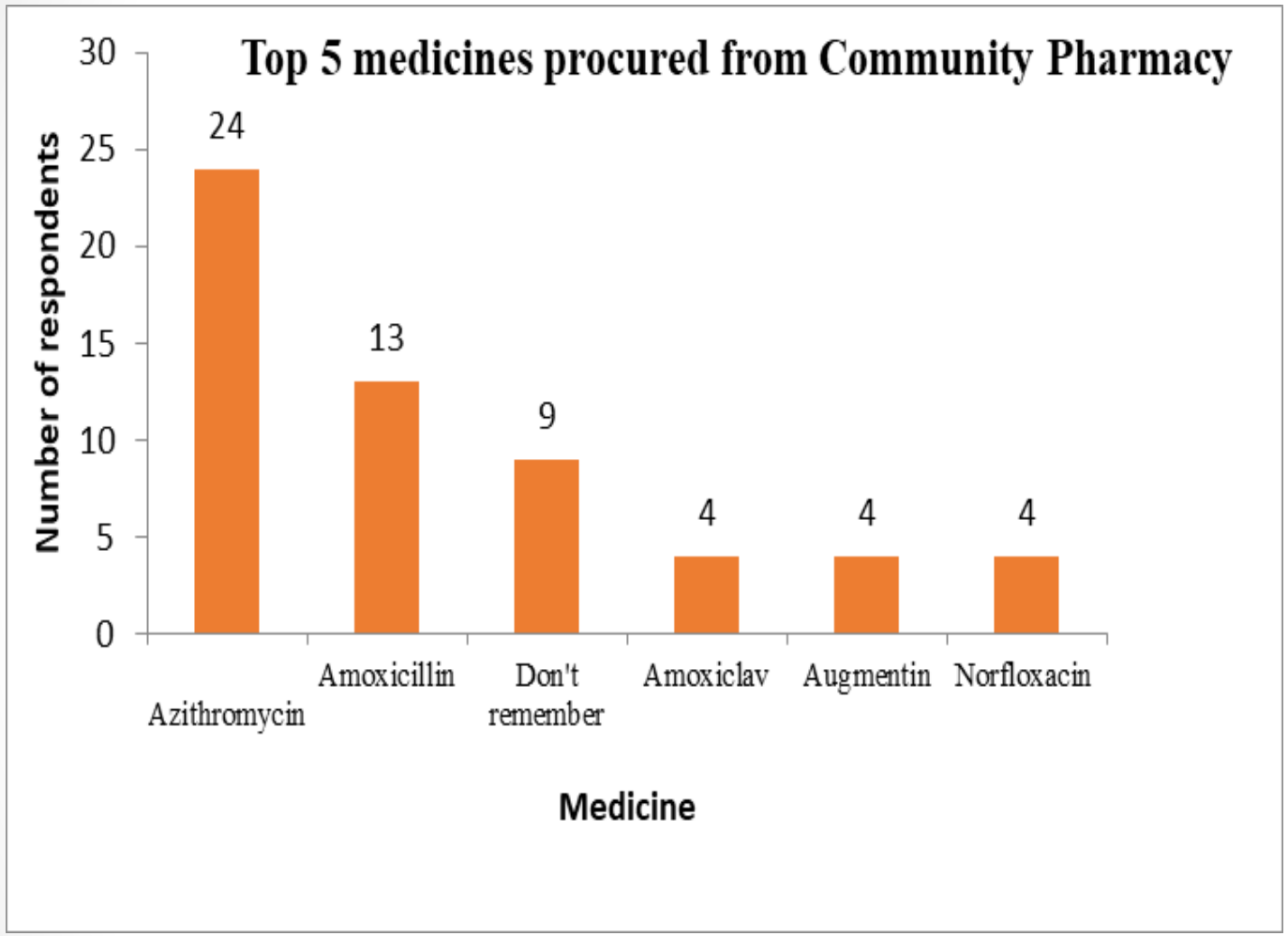
Seventy percent people of the 25% who didn't self-medicate were postgraduates while the rest 30% were graduates.

Amidst all the groups, about 41% respondents belonged to a life science background and only 25% of those had never self-medicated.




Major source of obtaining the medicines was community pharmacy (66%) followed by the left overs from the past prescription (19%). Around 12 % borrowed it from the family members and 3% had ordered them online

Figure 1




Azithromycin was the most bought medicine from the community pharmacy (35%) followed by the amoxicillin (around 19%). Around 13 % people did not remember which medicine they had bought to cure themselves.

Figure 2

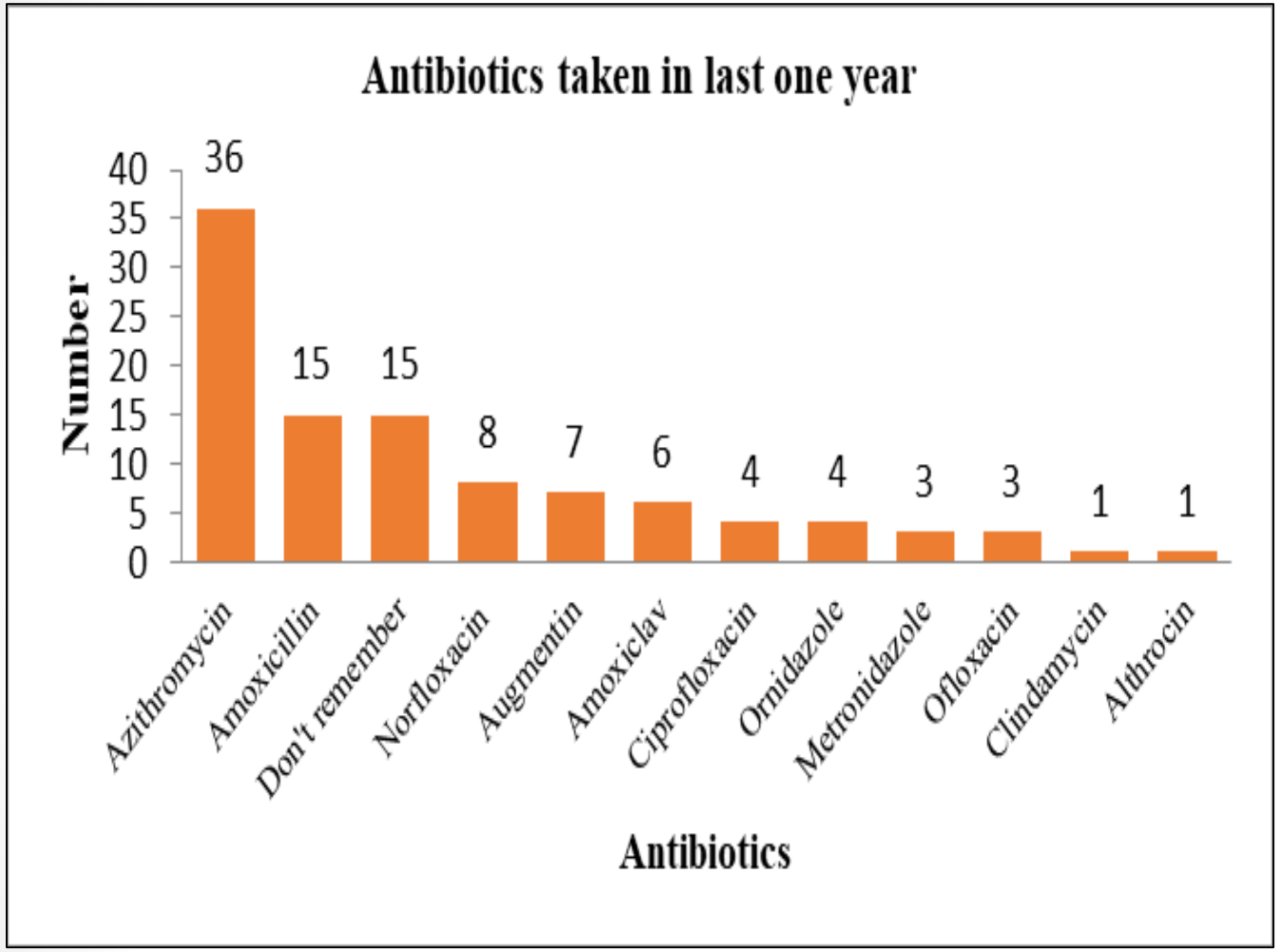
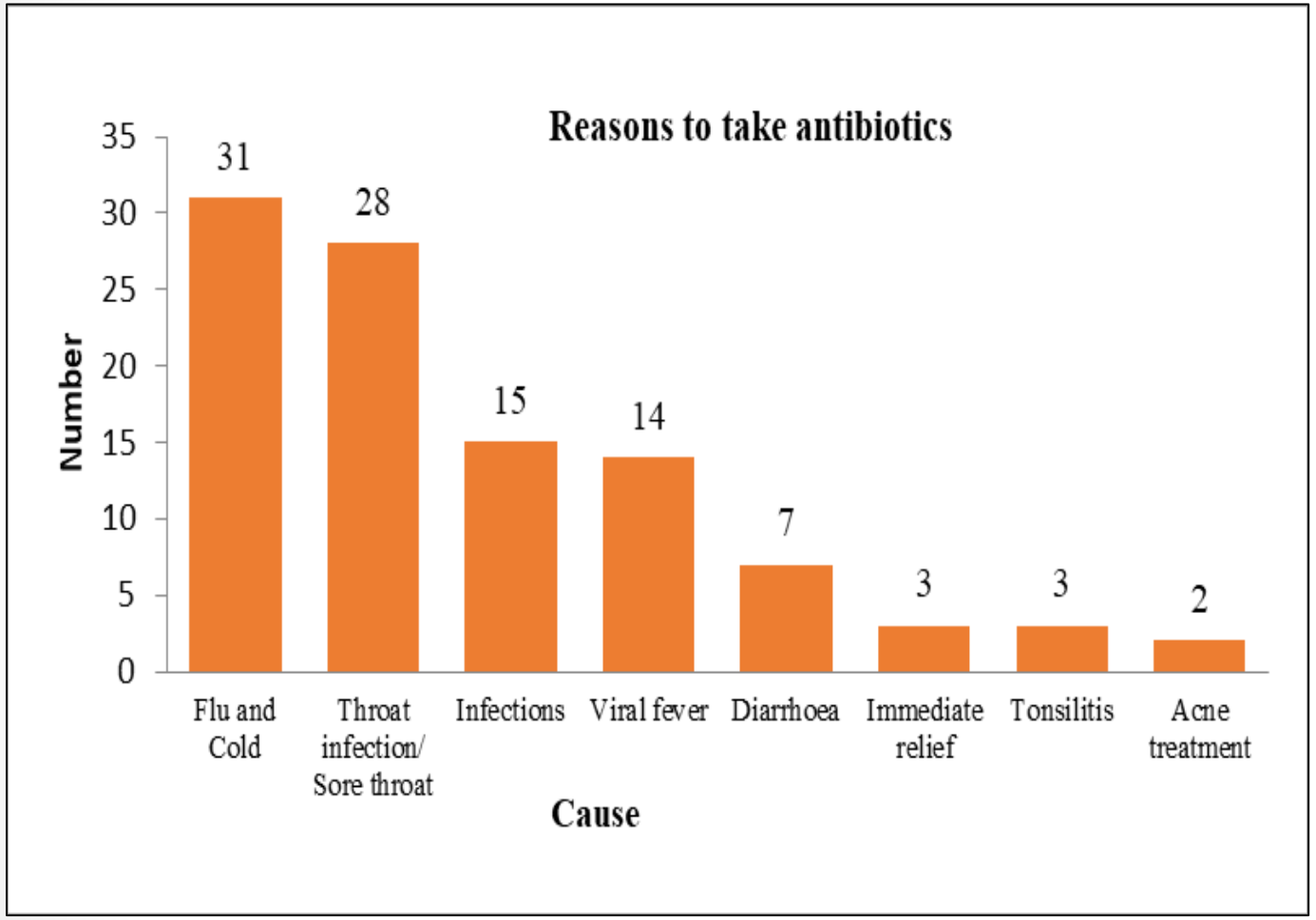



Figure 3 here gives an idea that Azithromycin (64%) has been the most self-medicated ATB in the last year by the respondents followed by amoxicillin (14.5%). Around fifteen percent of the respondents did not remember the medicines that they had consumed.

Figure 3




30% of the respondents had resorted to antibiotics due to flu and cold while 27% did so to get relief from throat infections.

Infections and viral fever were the reasons for 14.5% and 13.5 % respectively while around 8% took them because of diarrhoea. 3% and 2% took them for immediate relief or tonsillitis and acne treatment respectively.

Figure 4

| Table 3 Crosstabulation (Dosage_change* Stop_medicine) | | | | | |
|---|---|---|---|---|---|
| **Did you ever change the dosage of antibiotics deliberately during self-treatment?** | **When did you normally stop taking antibiotics? (%)** | | | | |
| | | After antibiotics ran out | After consulting a doctor/ | After symptoms disappeared | At the completion of the course |
| | No | 0 | 23 (30.6) | 0 | 52 (69.3) |
| | Yes | 4 (14.3) | 0 | 24 (85.7) | 0 |

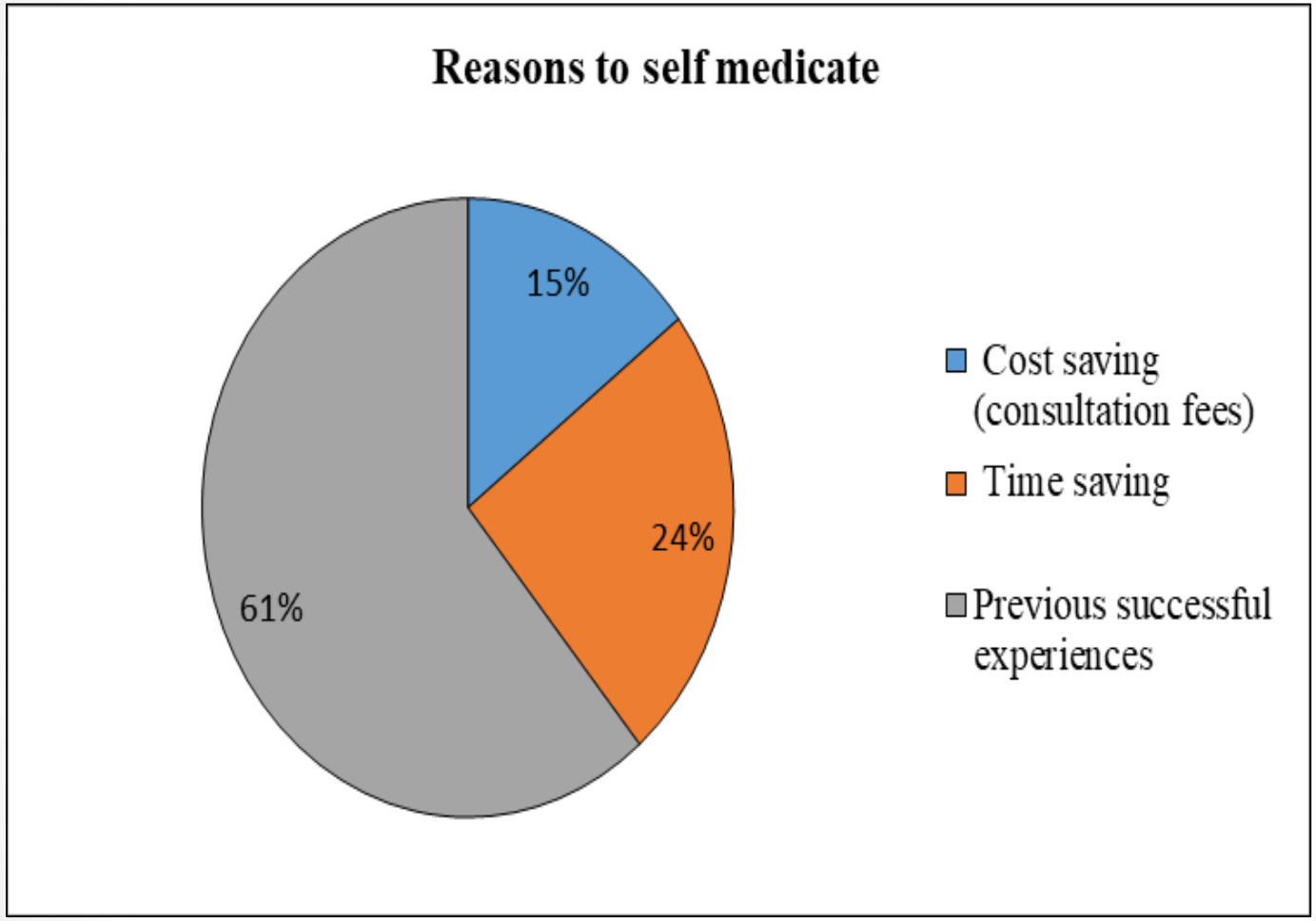
27% people admitted they had modified the dosage during the treatment without consulting a physician.

Out of them, about 86% percent people changed their dosage after symptoms disappeared while 14% did so because medicines ran out.

| Table 4 Crosstabulation (Dosage_change * why) | | | | | |
|---|---|---|---|---|---|
| **Did you ever change the dosage of antibiotics deliberately during self-treatment?** | **If you changed the dosage, why did you do it?** | | | | |
| | | Compliance issue | Forgot to take the medication | Medicines were over | Stopped working |
| | No | 0 | 0 | 0 | 0 |
| | Yes | 8 (28.5) | 11(39.28) | 4(14.2) | 5 (17.8) |

About 27% people were found to be non-compliant.

- 39% people said that they forgot to take the medicine
- 28.5% admitted having compliance issues.
- 18% people found them inefficient 14% did so because the medicines were over.




61% people chose to self-medicate due to past successful experience while 24% did so to save time.

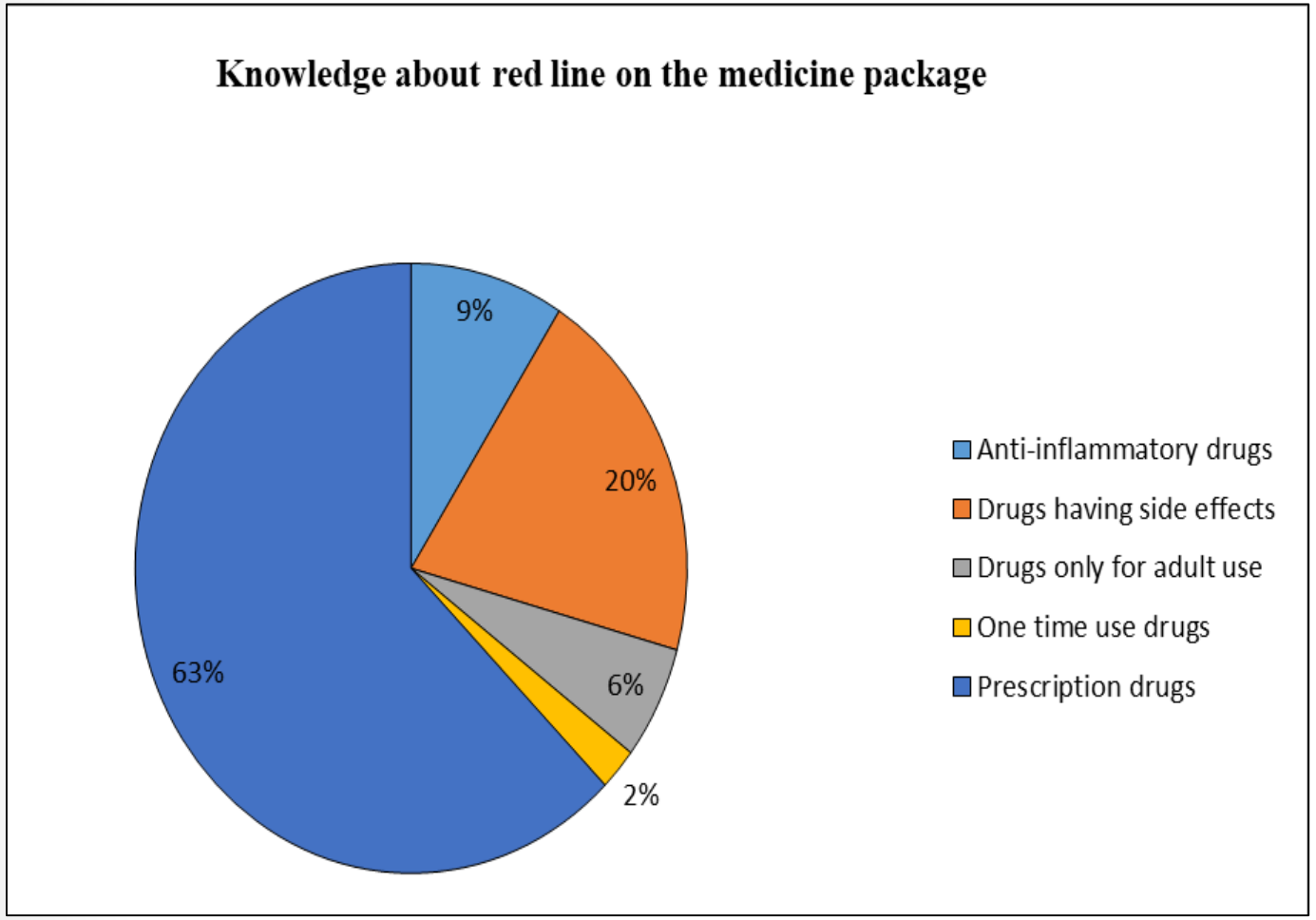
15% wanted to save consultation fees, so they chose to self-medicate

Figure 5

| Table 5 Crosstabulation (Source* Reason) | | | | |
|---|---|---|---|---|
| **Where do you usually obtain antibiotics from for self-medication?** | **What was your reason of self-medication with antibiotics? (%)** | | | |
| | | Cost saving (consultation fees) | Previous successful experiences | Time saving |
| | Community Pharmacy (over the counter) | 11 | 49 | 8 |
| | From other family members | 2 | 5 | 5 |
| | Leftover from previous prescription | 2 | 8 | 10 |
| | E-pharmacies | 0 | 1 | 2 |

Out of 61% respondents who self-medicated due to previous successful experience, more than three-fourths bought the medicine from community pharmacy.

Out of 15% respondents who self-medicated due to cost saving, almost three-fourths bought the medicine from community pharmacy. While out of 24% respondents who self-medicated due to time saving, almost 40% used left over medicines.




Out of all 133 respondents, almost 63 % (83) people knew that the red line on the package of medicine means that is it a prescription drug and 6% thought it is for adult use. Around one-tenth thought that it is indicative of anti-inflammatory drug while one fifth thought that it indicates that the drug has side effects.

Figure 6

# CONCLUSIONS

The study showed a high rate of consumption of antibiotics amongst the employees of the firm who usually procure them without the consultation of any physician and do not complete their course of the therapy

# SUGGESTIONS

- The patients should be made aware about the serious consequences of irrational use of antibiotic and antibiotic resistance

- Using all modes of media, various public education programs can be targeted towards the population which had scarce knowledge, wrong information, casual attitude or incorrect antibiotic use

- These awareness campaigns can make use of behaviour change communication and can be followed by an estimation of its productiveness

- Pharmacists should be given due value in improving mass health and can be given authority for restricting antibiotic dispensing without prescription

- Government should formulate guideline for the usage of the drugs by the physician and pharmacist and ensure its implementation

- A regular audit of the prescriptions and pharmacies can also be done

# LIMITATIONS

- The study was done at only one organization of Gurgaon and hence it cannot be generalized to the entire population

- Additionally, since it’s a questionnaire-based study, so honesty and the ability to recollect of the respondent plays a pivotal role in it.

- Also, this study was done in a metro study where people are more aware and educated.

# FINALLY

- This was a study done on educated employees of a pharmaceutical consulting firm but the results show that self-medication is widely prevalent, and the topic should be researched further for other sections of the society

- Awareness and strict implementation of guidelines is the key to reduce the self medication


Thank you!