

A Survey on
“Drug Purchased Without Prescription (Self-Prescription)”
By
The Students of Pharmacy, East West University.

A Research Paper submitted to the Department of Pharmacy, East West University, in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Pharmacy.

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DECLARATION BY THE RESEARCH CANDIDATE

I, Akhiul Hoque, ID: 2013-1-70-047, hereby declare that the dissertation entitled “**A survey on Drug Purchased Without Prescription (Self-Prescription) by the Students of Pharmacy, East West University**” submitted to the Department of Pharmacy, East West University, in the partial fulfillment of the requirement for the degree of Bachelor of Pharmacy (Honors) is a genuine & authentic research work carried out by me. The contents of this dissertation, in full or in parts, have not been submitted to any other institute or University for the award of any degree or Diploma of Fellowship.

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CERTIFICATION BY THE SUPERVISOR

This is to certify that the dissertation, entitled “**A survey on Drug Purchased Without Prescription (Self-Prescription) by the Students of Pharmacy, East West University**” is a research work done by Akhiul Hoque (ID: 2013-1-70-047), in partial fulfillment of the requirement for the degree of Bachelor of Pharmacy under my supervision.

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ENDORSEMENT BY THE CHAIRPERSON

This is to certify that the dissertation, entitled “**A survey on Drug Purchased Without Prescription (Self-Prescription) by the Students of Pharmacy, East West University**” is a research work done by Akhiul Hoque (ID: 2013-1-70-047), under the guidance of **Md. Anisur Rahman**, Assistant Professor, in partial fulfillment of the requirement for the degree of Bachelor of Pharmacy.

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DEDICATION

This research paper is dedicated to my beloved parents **Late Enamul Hoque & Aleya Begum**, my beloved brothers **Md. Ahsanul Hoque & Md. Ashraful Hoque**, sister **Wahfa Hoque**, **respected and honourable faculties and loving friends** for their unconditional support towards me.

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Abbreviation

OTC- Over the counter

SMH- Self-medication hypothesis

Abstract

To estimate the prevalence of self-medication among the students of Pharmacy, East West University, Bangladesh and evaluate the factors associated with self-medication.

A pre-tested questionnaire was used to collect data from 350 Pharmacy students of East West University, Bangladesh, using a convenient sampling technique. Prevalence of the practice of self-medication was estimated in number and percentages.

All the respondents were aware of self-prescription and they had a knowledge of it. Among the 350 respondents, 60% were female and 40% were male pharmacy students. 99% of them had purchased medicine without prescription. Mostly they had purchased medicine for themselves (89%) or their parents (68%). About 57% purchased once in a month without prescription. But the percentage of health checkup was not fully satisfied. Most of them also faced adverse drug reaction. They mostly purchased omeprazole (83%) because they mostly suffered from acidity (90%).

Knowledge about appropriate self-medication was poor, attitude towards self-medication was positive, and the practice of self-medication was common and often inappropriate because pharmacy students do not deal with diagnosis process.

Keywords: Self-medication, OTC, Pharmacy students, Self-care.

Chapter 1

Introduction

1.1 Overview:

Self-medication is the use of drugs with therapeutic intent but without professional advice or prescription. It has also been defined as the use of nonprescription medicines by people on their own initiative. (Jamison AJ et al., 1999)

Drugs that are prone to self-medication include analgesics, antimalarial, antibiotics and cough syrups. (Ann Afar Med, 2000)

Self-medication with antibiotics occurs in many developing countries where drugs are not well-regulated. Hence there is easier access to prescription or over-the-counter medicines without prescription. Self-medication could cause bacteria resistance to such antibiotics and may precipitate the emergence of multiple resistant organisms that would be difficult to treat and this has caused increased morbidity. Perception of illness and incessant advertising, among others, have increased the prevalence of self-medication which accounts for about 2.9 - 3.7 % causes of death in hospitals as a result of drug-drug interactions. It has also been reported that drug use is influenced by the sociodemographic characteristics of drug consumers such as gender, morbidity, age, attitudes about life and health, stress, and social roles but has nothing to do with education and ethnicity. Some of the problems associated with self-medication such as masked diagnoses, use of excessive drug dosage, prolonged duration of use, drug interactions, polypharmacy and super infection can occur in self-medicating individuals. However, there is substantial variation in the prevalence rates of self-medication among developing and developed nations due to inherent differences in cultural and socioeconomic factors, disparities in health care systems such as reimbursement policies, access to health care, and drug dispensing policies. The factors that influence self-medication practices remain issues of intense debate in academic discourse. Practices in self-medication have raised a lot of unresolved research questions such as: Which ailments do university students treat through self-medication? What are the types and sources of these non-prescribed medicines? Is there any relationship between level of education and self-medication practice? What factors influence self-medication practices among university students? What strategies can be crafted to discourage self-medication practices in general? The objective of this study was to assess

the prevalence of self-medication among the students of Pharmacy, East West University, as well as the factors associated with self-medication. (KP Osemene and A Lamikanra, 2012)

It is common for people to feel unwell, and human beings have an inherent tendency to use herbs, potions, medications etc. for treating themselves. Every day people throughout the world act on their own for their health; they practice self-care. In some instances, they do so through self-medication, which is now increasingly being considered as a component of self-care. (Hughes CM et al., 2001)

Some governments are increasingly encouraging self-care of minor illnesses, including self-medication. Encouragement of self-care is seen as giving patients every opportunity to take responsibility and build confidence in their ability to manage their own health. Patient empowerment is viewed as a positive step in the development of the relationship between patient and healthcare provider and is considered as an important health policy concept. (World Health Organization, 1998)

Self-medication is defined as the use of medication, whether modern or traditional, for self-treatment. Studies done on self-medication reveal that it is a fairly common practice, especially in economically deprived communities. It is a growing trend of 'self-care' which has its positive and negative aspects. (Geissler PW et al., 2000)

In several studies it has been found that inappropriate self-medication results in wastage of resources, increases resistance of pathogens and generally entails serious health hazards such as adverse drug reactions, prolonged suffering and drug dependence. On the other hand, if done appropriately, self-medication can readily relieve acute medical problems, can save the time spent in waiting to see a doctor, may be economical and can even save lives in acute conditions. It is now accepted that self-care in the form of responsible self-medication can be beneficial for patients, healthcare providers, the pharmaceutical industry and governments. (Hughes CM et al., 2001)

The World Health Organization (WHO) has also pointed out that responsible self-medication can help prevent and treat ailments that do not require medical consultation and provides a cheaper alternative for treating common illnesses. However, it is also recognized that self-medication must be accompanied by appropriate health information. Studies on self-medication show that it is influenced by many factors, such as education, family, society, law, availability of drugs and exposure to advertisements. A high level of education and professional status have been mentioned as predictive factors for self-medication. The reasons for self-medication mentioned in the literature are mild illness, previous experience of treating similar illness, economic considerations and a lack of availability of healthcare personnel. The most common medications used for self-medication are analgesics and antimicrobials. Self-medication is an area where governments and health authorities need to ensure that it is done in a responsible manner, ensuring that safe drugs are made available over the counter and the consumer is given adequate information about the use of drugs and when to consult a doctor. Unlike other aspects of self-care, self-medication involves the use of drugs, and drugs have the potential to do good as well as cause harm. In this context, the pharmacist has an important role. There is a paucity of studies on self-medication among pharmacy students. Pharmacy students may differ from the general population because they are exposed to knowledge about diseases and drugs. The present study was undertaken to determine the knowledge, attitude and practice of self-medication among pharmacy students of the East West University, Bangladesh. (Henry James et al., 2005)

1.2 Prescription:

A physician's order for the preparation and administration of a drug or device for a patient. A prescription has several parts. They include the superscription or heading with the symbol "R" or "Rx", which stands for the word recipe (meaning, in Latin, to take); the inscription, which contains the names and quantities of the ingredients; the subscription or directions for compounding the drug; and the signature which is often preceded by the sign "s" standing for sigma (Latin for mark), giving the directions to be marked on the container. (Medicine Net, 2016)

1.3 Self Medication Hypothesis (SMH):

It states that the individuals' choice of a particular drug is not accidental or coincidental, but instead, a result of the individuals' psychological condition, as the drug of choice provides relief to the user specific to his or her condition, specifically the drug which causes addiction. (Bowen D et al., 2000)

This initially focused on heroin use, but a follow-up paper added cocaine. The SMH was later expanded to include alcohol, and finally all drugs of addiction. (Flanigan J. et al., 2012) Khantzian revisited the SMH, suggesting there is more evidence that psychiatric symptoms, rather than personality styles, lie at the heart of drug use disorders. Khantzian specified that the two crucial aspects of the SMH were that drugs of abuse produce relief from psychological suffering and the individual's preference for a particular drug is based on its psychopharmacological properties. (Bowen D et al., 2000)

Every drug has advantages as well as disadvantages. Hence, specific conditions such as mental illness, depression, and anxiety and post-traumatic stress disorder for which if people tend to SM are considered as threat.

Drugs that come under threat for SM are:

- CNS depressants
- Psychostimulants
- Opiates
- Cannabis
- Drugs used for infectious disease, i.e. antibiotics. (Khantzian EJ et al., 2003)

Although literature emphasizes on inappropriate SM causing undesirable consequences and effects, iatrogenic diseases, and mask progressive diseases, a proper search clearly states the prevalence of such consequences are more common with improper use of psychoactive drugs/antibiotics (overuse or abuse) which causes resistance for the bacterial strains. (Duncan DF, 1975)

Several studies and reviews on SM practices have been published in different regions of the world in the past decade, each stressing on the high prevalence of SM among different sections of people such as medical, dental, nursing, pharmacy, and university students. A few studies also assessed among the general public and pharmacy vendors. (Simon AK et al., 2015)

Chapter 2

Literature Review

A pre-tested questionnaire was used to collect data from 2000 university students in Nigeria using a convenient sampling technique. Prevalence of the practice of self-medication was estimated in percentages while factors associated with self-medication were evaluated using multiple regression. (Fadare JO, 2011)

The prevalence of the practice of self-medication was high among the age group of 25 – 44 years but lower in the 15 - 24 and ≥ 45 year age groups, respectively. Females exhibited higher prevalence of self-medication than males. Among undergraduates, self-medication increased as the students' class level in the university increased. Postgraduate students exhibited low prevalence of self-medication practices. Self-medication was significantly associated with age, gender and students' class level in the university at $p < 0.001$. A majority, 982 (53.8 %), of the students used antibiotics for self-medication while 845 (46.3 %) used anti-malarial drugs for self-medication. Sources of drugs for self-medication were patent medicines store (901 or 49.3 %), community pharmacies (531 or 29.1 %), friends (210 or 11.5 %), relatives (130 or 7.1 %) and left-over drugs from previous prescriptions (55 or 3.0 %). (KP Osemene and A Lamikanra, 2012)

The study revealed that age, gender and students' level in the university influenced self-medication practices. The use of antibiotics in self-medication calls for urgent health policy intervention. (KP Osemene and A Lamikanra, 2012)

Large variations in outpatient antibiotic use between countries have been reported. It has been suggested that cultural determinants may have an impact on differences in outpatient antibiotic use in the United States (US) and Germany resulting in different resistance prevalence in respiratory pathogens on a national level. Different opinions and traditions regarding how to treat infectious conditions in different countries has been described. Studies in the US reported ethnic and cultural differences in levels of public knowledge and attitudes were concerning antibiotic use and awareness of antibiotic resistance. (Grigoryan et al., 2007)

In total, 1101 respondents were interviewed on their attitudes towards appropriateness of self-medication with antibiotics and situational use of antibiotics, beliefs about antibiotics for minor ailments, knowledge about the effectiveness of antibiotics on viruses and bacteria and awareness about antibiotic resistance. To deal with the possible confounding effect of both use of self-medication and education we performed stratified analyses, i.e. separate analyses for users and non-users of self-medication, and for respondents with high and low education. The differences between countries were considered relevant when regression coefficients were significant in all stratum-specific analyses. (Grigoryan et al., 2007)

Self-medication among future health care professionals can represent a serious threat to professionalism in medicine and it has potential to put at risk public trust into this profession. Research was performed as a cross-sectional study and it included 1296 (84.1%) 1st, 3rd and 6th year students of School of Medicine, University of Belgrade. Students filled out a demographic and self-medication questionnaire created for the purpose of this research and the Physical Health Questionnaire – 9 (PHQ-9). Self-medication was reported by 79.9% students. The most frequently self-prescribed medications were analgesics (55.4%). (Jasminka AL, 2014)

A descriptive cross-sectional study was carried out in Mansoura University, Egypt, and included 1st and last year students of both medical and nonmedical faculties. Results. Prevalence of self-medication was 62.9%. Younger age, female, medical, and ever-married students and those having home pharmacy tended to self-medicate more than their peers with significant difference between them. Being medical student, being from urban area, having good current health condition, being careless about health, and having drugs stored at home pharmacy were independently associated with the likelihood of self-medicating.

Prevalence of self-medication among university students is high which constitutes a health problem that needs intervention. The mean age of students was years with a higher mean age of the father than the mother (53.3 and 45.5 years respectively.). Most of the students were females (78.1%) and the majority (91%) were ever married, with nearly equal distribution

regarding their residence; the medical sector represented 52% while 48% were nonmedical; about 60% were in their last grade with the most frequent education of their father and mother being university and higher level. About 61% of students reported that their current health condition was good while only 45.1% were careful regarding their degree of care about health, and most (77.5%) stored drugs at their home pharmacy. (R. M. Helal and H. S. Abou-ElWafa, 2017)

A self-administered questionnaire eliciting self-medication practices was distributed to university students in a cross-sectional design. The 4 variables, sex, type of school, self-care orientation, and medication knowledge, were investigated for possible correlation with self-medication practices. Multiple logistic regression and Chi-square statistics were used in data analysis.

Self-medication practices were reported by 98% of the surveyed students (n = 1581). Approximately two thirds of the respondents reported a high self-care orientation and one third reported 'good' medication knowledge. Multiple logistic regressions indicated that self-care orientation, medication knowledge, and sex were insignificant predictors of self-medication practices, whereas the type of school (P = .012) was a significant predictor. A significant relation between the 4 variables and the type of therapeutic class used in self-medication was observed. For example, males were more inclined to use anti-allergic medications (OR = 1.48) than females. Medical students were more likely to use laxatives/antidiarrheal agents (OR = 1.49) than nonmedical students. Respondents with high a self-care orientation were more inclined to use headache relievers (OR = 2.22) compared to those with low self-care orientation. The most commonly reported reason for self-medication practices was simplicity of the illness encountered. (Ansam F. Sawalha, 2008)

A cross-sectional study was conducted at Universidade Federal do Rio Grande (FURG), state of Rio Grande do Sul, Brazil. Of 830 students in the sample, 95% answered the questionnaire – 789 students enrolled in 10 undergraduate programs. Mean age was 22 ± 6.17 years. The

students answered a questionnaire covering socio-economic and demographic variables, use of medication, and medication knowledge. Information was collected on the conditions treated with medication, the medications used, and attitude towards self-medication. Of 789 students, 86.4% self-medicated (88.5% of 446 healthcare students). There were no significant differences in self-medication between healthcare and non-healthcare students, nor between first and last-year students. Bivariate and multivariate analyses showed a significant association between self-medication and having children ($p = 0.01$), having a home pharmacy ($p < 0.001$) and adequate medication knowledge ($p = 0.01$). The most frequently used active ingredients were acetaminophen (paracetamol), dipyrrone, aspirin, phytotherapeutic compounds, and tea. Illicit drug use was significantly associated with self-medication in the multivariate analysis. (Silva MG, 2012)

The study was undertaken to evaluate various aspects of self-medication in medical students. A prospective, cross-sectional, questionnaire-based study was carried out among 488 medical students selected by simple random sampling from January 2013 to June 2013. Data was collected and analyzed for counts and percentage. Students reported self-medication in the preceding one year was 71.7 % and the prevalence was more in final year students. Fever and headache were the most frequently reported illnesses, commonly used drugs were antipyretics and analgesics, obtained information through reading material, and reasons quoted were minor ailments and quick relief. Majority students agreed that medical knowledge is necessary for administration of medicine by self. Self-medication is highly prevalent in medical students, which is quite alarming. The present study was carried out among 488 MBBS students, of which 230 (47.2%) were males and 258 (52.8%) were females. The mean age of students was 19.89 ± 1.41 years ranging from 17 to 24 years? Among these 488 students, 132 (27.1%), 109 (22.3%), 131 (26.8%), and 116 (23.8%) were studying in I MBBS, II MBBS, III-I MBBS, and III-II MBBS respectively. (Arti A. Kasulkar and M. Gupta, 2014)

Chapter 3

Methodology

3.1 Type of the Study

It was a survey based study. So, Data are important here.

3.2 Study Area

The survey was conducted on the students of Department of Pharmacy at East West University, Dhaka, Bangladesh.

3.3 Study Population

In this study, a total number of 350 pharmacy students were assessed. Among them 140 were Male students and 210 were Female students. Verbal consents were obtained from the eligible participants before.

3.3.1 Inclusion Criteria

Must be students from the Department of Pharmacy, East West University, Bangladesh.

Both male and female students.

3.3.2 Exclusion Criteria

Who were not willing to participate or not from pharmacy background.

3.4 Questionnaire Development

The questionnaire was written in simple English in order to avoid unnecessary semantic misunderstanding. Extra space was however, allowed after some questions for the participants'

comments; and in most cases, these were used as qualifying remarks which aided considerably in giving answers to specific questions and in providing additional information which assisted the interviewers in drawing up conclusions.

3.5 Sampling Technique

In this study convenient sampling technique was followed.

3.6 Data Analysis

After collecting, the data were checked and analyzed with the help of Microsoft Excel 2010. The result was shown in bar, pie, column and line chart.

Chapter 4

Results

4.1 Gender Distribution of the Respondents:

Table: 4.1

Gender	Respondents' Number	Percentage
Male (M)	140	40%
Female (F)	210	60%
Total	350	100%

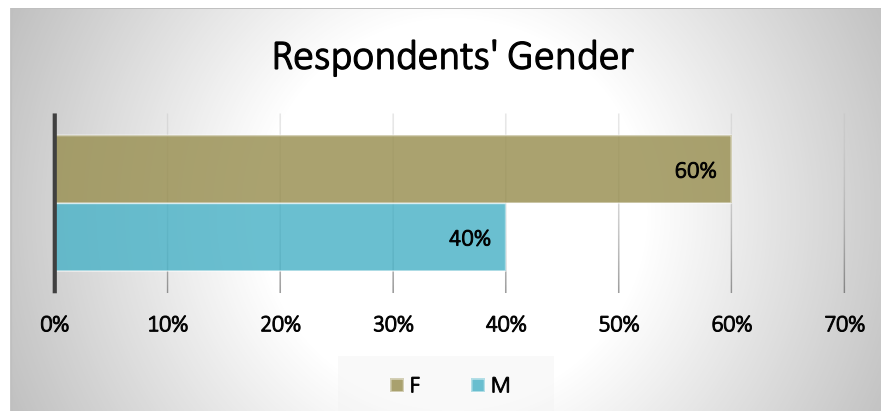
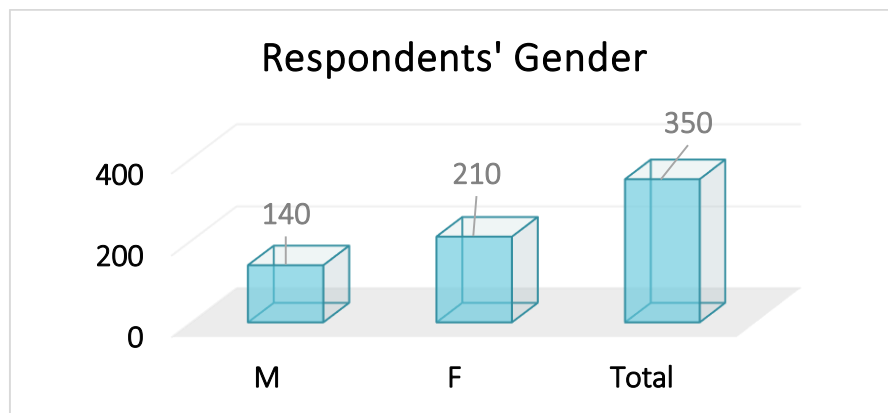


Figure 4.1: Gender Distribution of the Respondents.

Among the respondents, during this study it was found that **140** respondents were Male and **210** respondents were Female. In percentage, **40%** were Male and **60%** were Female. The total respondents were **350**.

4.2 Age Distribution of the Respondents:

Table: 4.2

Age (years)	Respondents' Number	Percentage
15-20	74	21%
21-25	268	77%
25+	8	2%
Total	350	100%

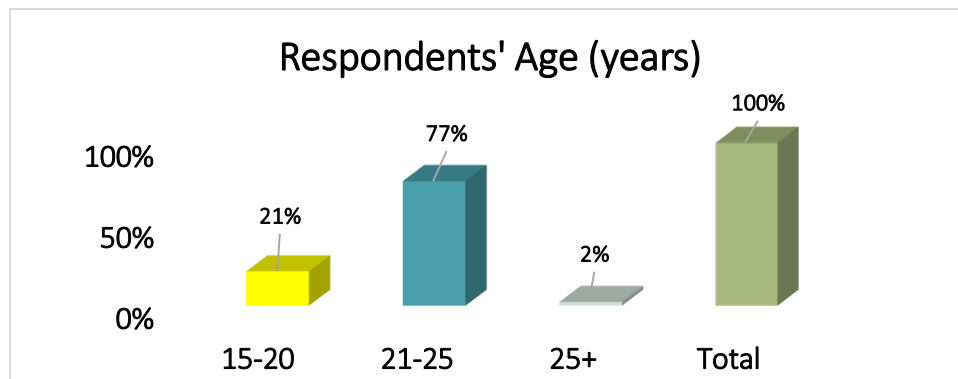
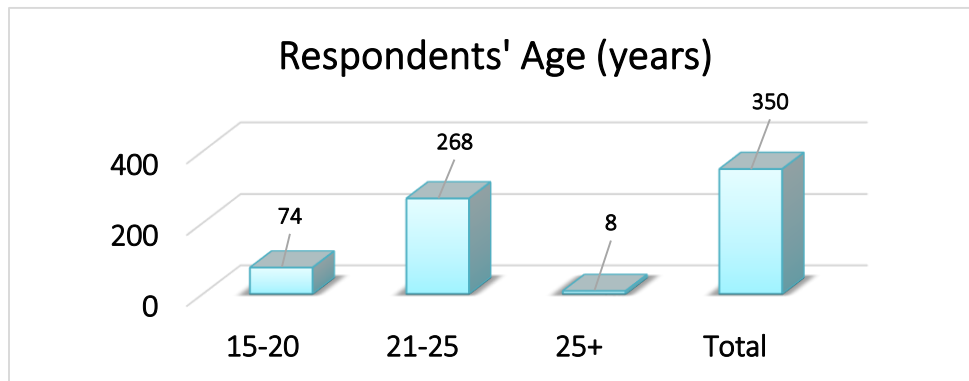


Figure 4.2: Age Distribution of the Respondents.

Among the respondents, during this study it was found that **74** respondents (**21%**) were aged between 15-20 years, **268** respondents (**77%**) were aged between 21-25 years and rest of the **8** respondents (**2%**) were more than 25 years of age.

4.3 Weight Distribution of the Respondents:

Table: 4.3

Weight	Respondents' No.	Percentage
40-60	189	54%
61-80	156	45%
80+	5	1%
Total	350	100%

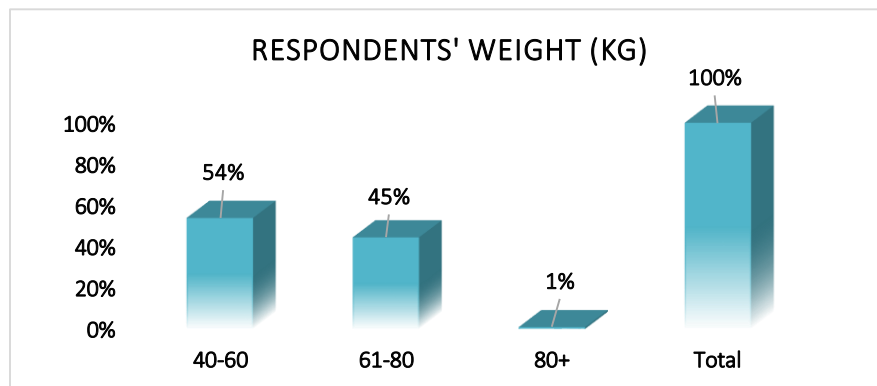
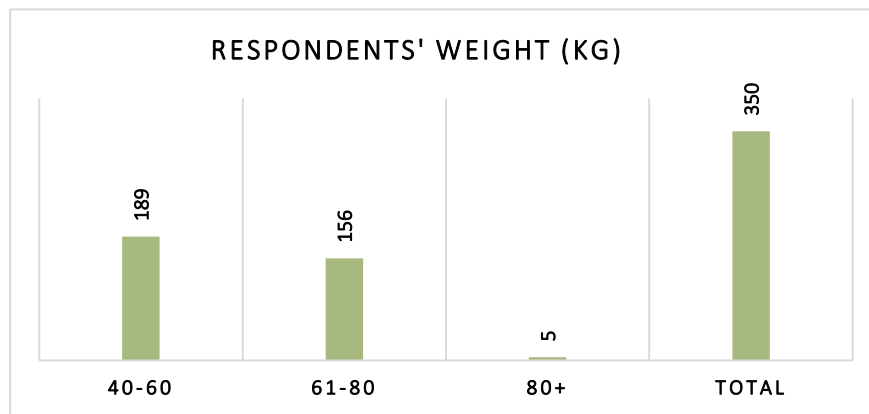


Figure 4.3: Weight Distribution of the Respondents.

Among the respondents, during this study it was found that **189** respondents (**54%**) were weighed between 40-60 Kg, **156** respondents (**45%**) were weighed between 61-80 Kg and rest of the **5** respondents (**1%**) were more than 80 Kg.

4.4 Economic Status of the Respondents:

Table: 4.4

Economic Status	Respondents' No.	Percentage
Rich	1	0%
Upper Middle	59	17%
Middle	283	81%
Poor	7	2%

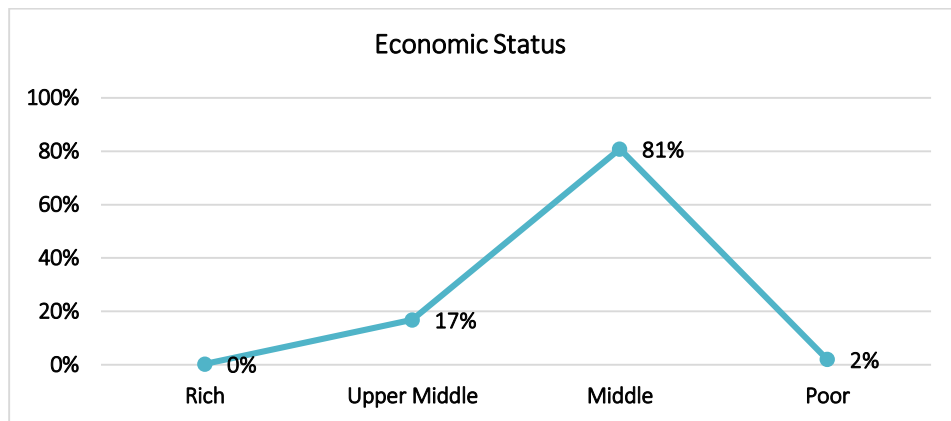
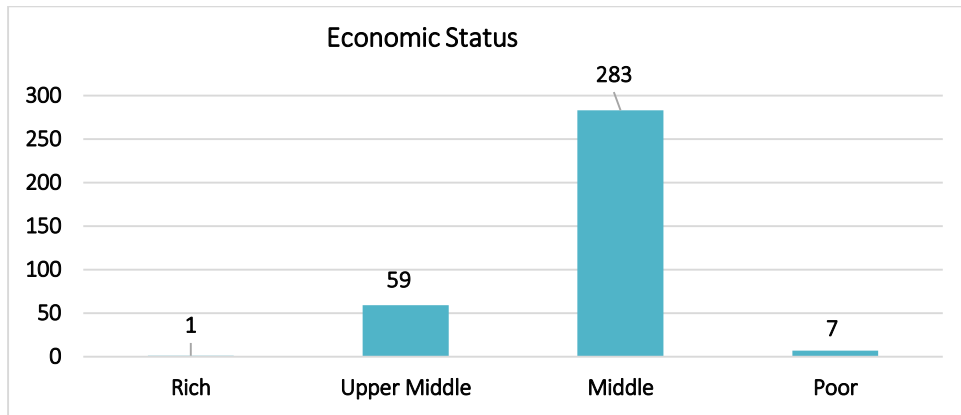


Figure 4.4: Economic Status of the Respondents.

Among the respondents, during this study it was found that **1** respondents (**0%**) were Rich, **59** respondents (**17%**) were Upper Middle class, **283** respondents (**81%**) were Middle class and **7** respondents (**2%**) were Poor. So, Middle class was the prominent among all classes.

4.5 Respondents Purchased Medicine without Prescription:

Table: 4.5

Self-Prescription	Respondents' No.	Percentage
Yes	345	99%
No	5	1%

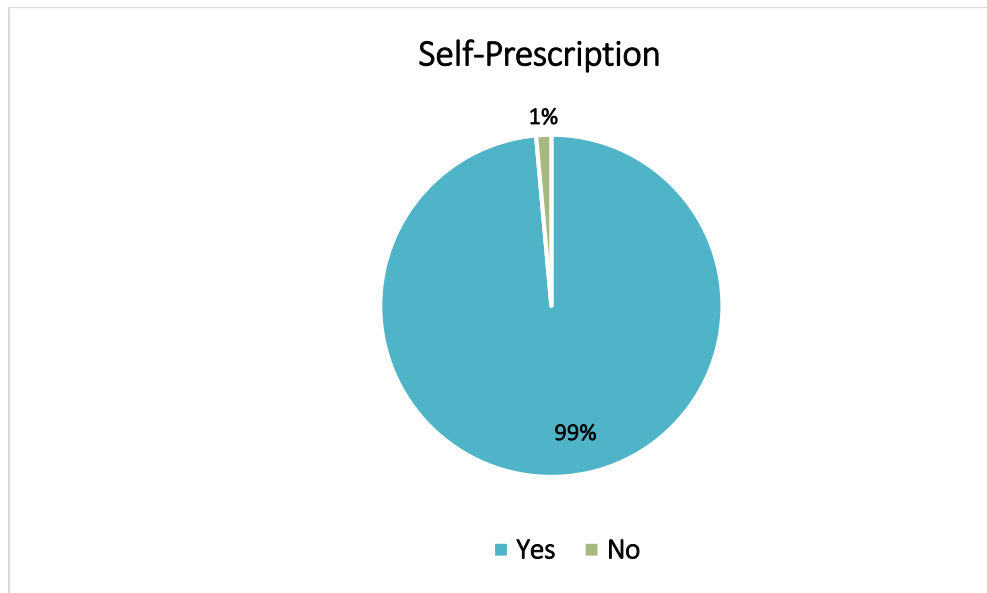


Figure 4.5: Self-Prescription tendency of the Respondents.

During this study among the 350 respondents, it was found that 345 respondents (99%) were purchased medicine without prescription and only 5 respondents (1%) did not purchase medicine without prescription.

4.6 For whom did Respondents purchase medicine?

Table: 4.6

For Whom	Respondents' Number	Percentage
Myself	313	89%
Parents	237	68%
Relatives	146	42%
Friends	62	18%

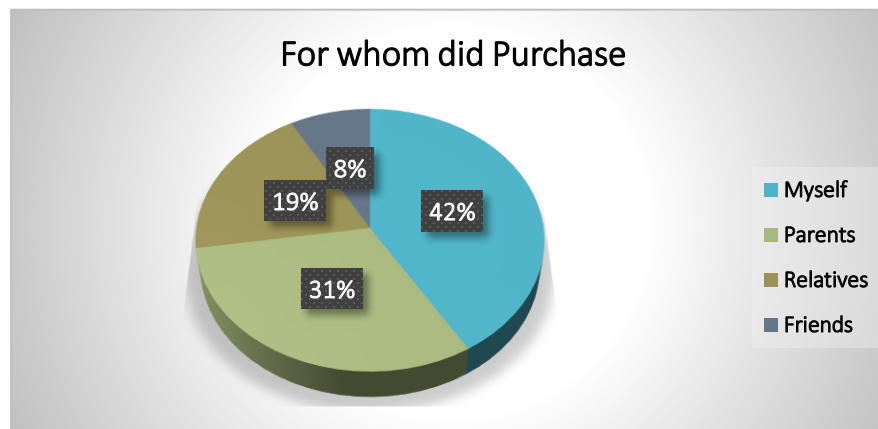
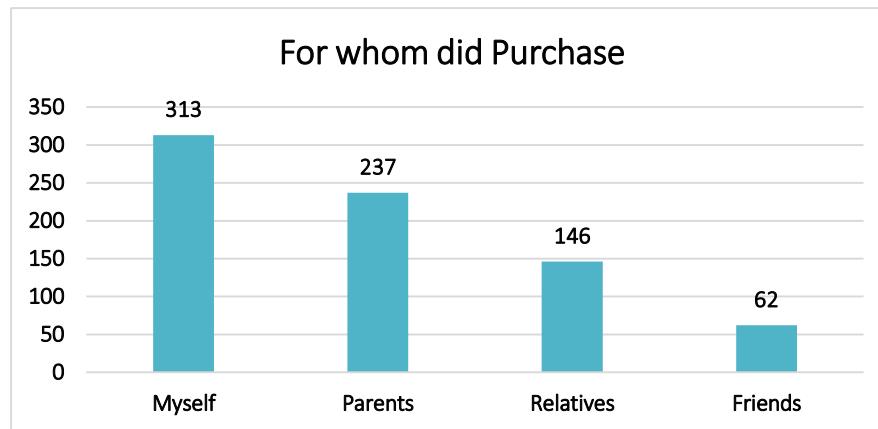


Figure 4.6: Purchase of medicine for person.

Among the respondents, during this study it was found that **313** respondents (**42%**) purchased medicine for themselves, **237** respondents (**31%**) purchased for their parents, **146** respondents (**19%**) purchased for their relatives and **62** respondents (**8%**) purchased for their friends.

4.7 Frequency of purchase of medicine:

Table: 4.7

Frequency	Total Times	Percentage
>3 times	31	9%
2-3 times	116	33%
Once in a month	201	57%
Blanks	2	1%

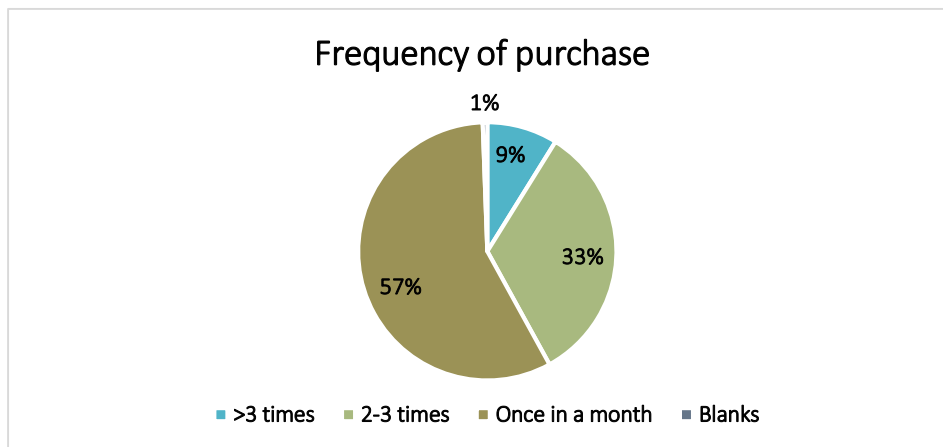
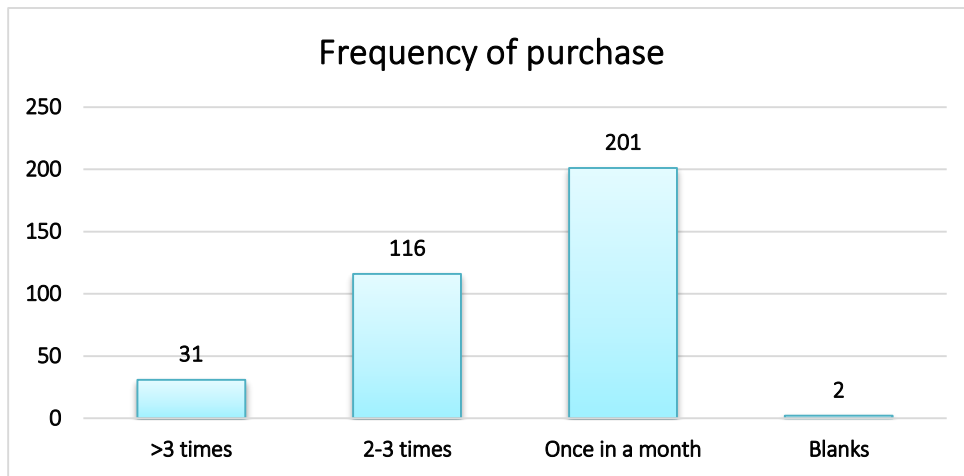


Figure 4.7: Frequency of purchase of medicine.

Among the respondents, during this study it was found that **31** respondents (**9%**) purchased medicine >3 times, **116** respondents (**33%**) purchased 2-3 times, **201** respondents (**57%**) purchased once in a month and **2** respondents (**1%**) did not purchase any medicines in the last six months.

4.8 Distribution of regular health checkup:

Table: 4.8

Health Checkup	Count
Yes	151
No	199

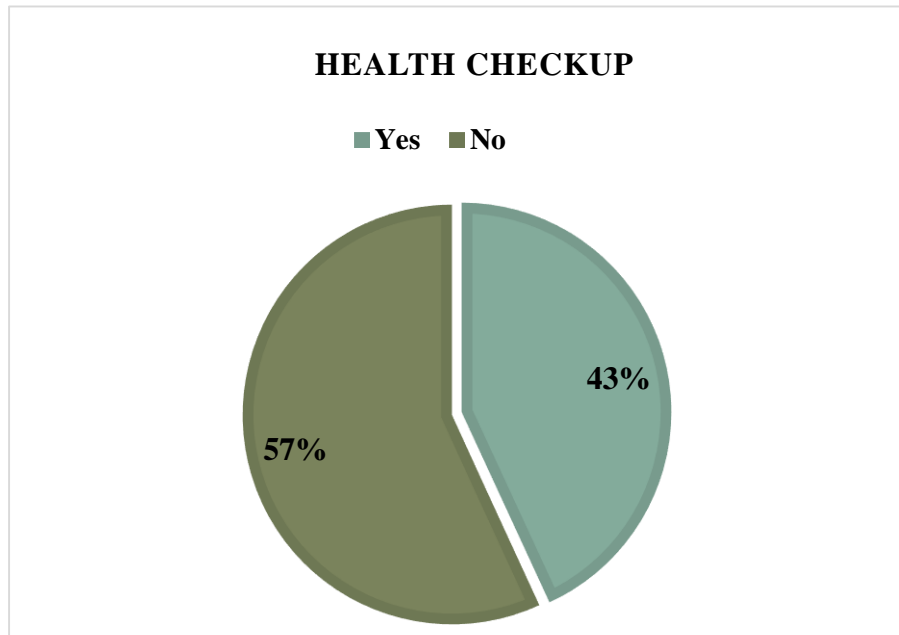


Figure 4.8: Regular health checkup.

Among 350 respondents, 151 respondents (43%) did their regular health checkup and 199 respondents (57%) did not have regular health checkup.

4.9 Distribution of adverse drug effect:

Table: 4.9

Adverse drug effect	Count
Yes	181
No	169

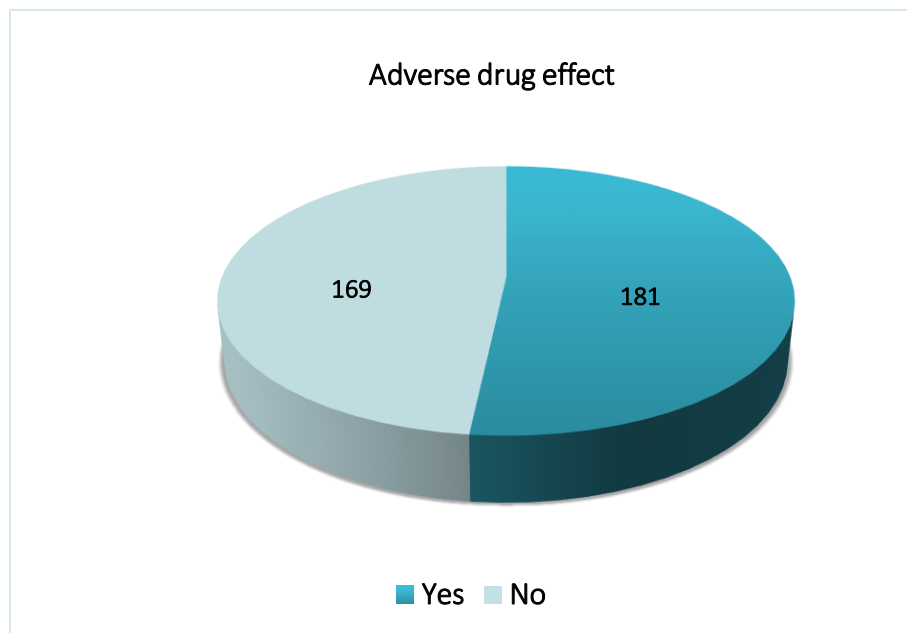


Figure 4.9: Regular health checkup.

Among **350** respondents, **169** respondents did face adverse drug effect and **181** respondents did not face adverse drug effect.

4.10 Distribution of Seminar Attendance:

Table: 4.10

Seminar Attendance	Respondents' Number	Percentage
Yes	278	79%
No	72	21%

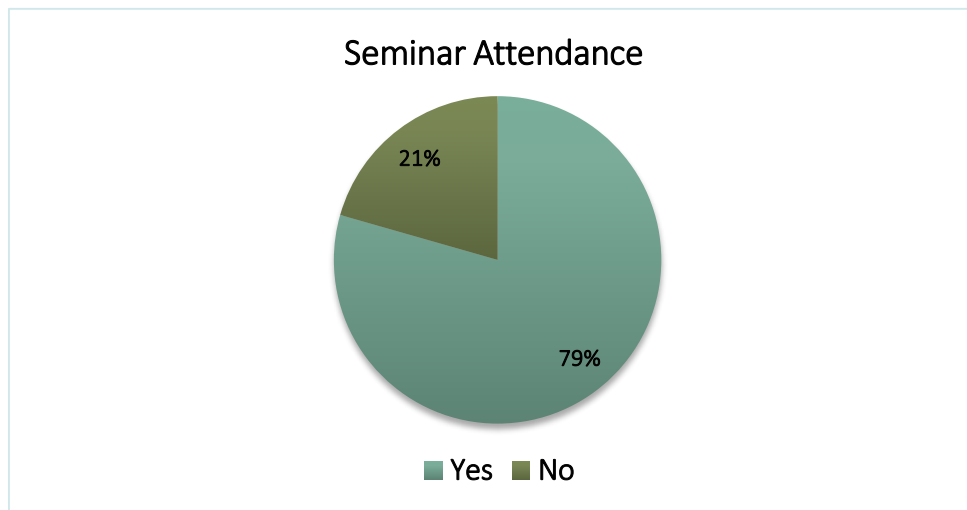


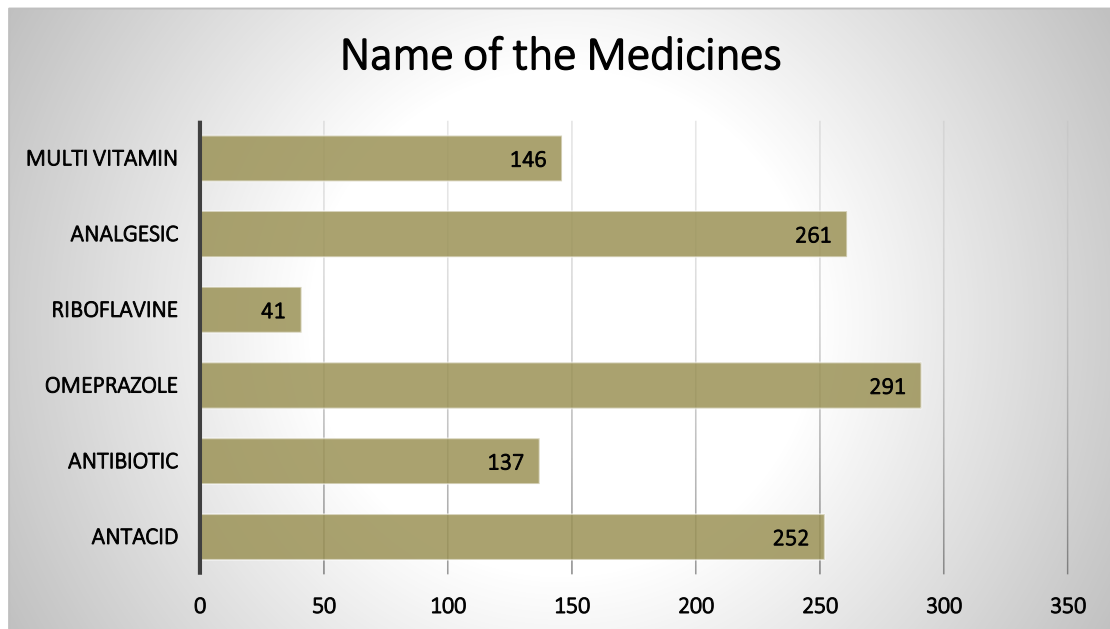
Figure 4.10: Distribution of Seminar Attendance.

Among 350 respondents, 278 respondents (79%) were attended medicine related seminars and only 72 respondents (21%) did not take part in any medicine related seminars.

4.11 Name of the medicines purchased without Prescription:

Table: 4.11

Name of the Medicines	Respondents' Number	Percentage
Antacid	252	72%
Antibiotic	137	39%
Omeprazole	291	83%
Riboflavin	41	12%
Analgesic	261	75%
Multi Vitamin	146	42%



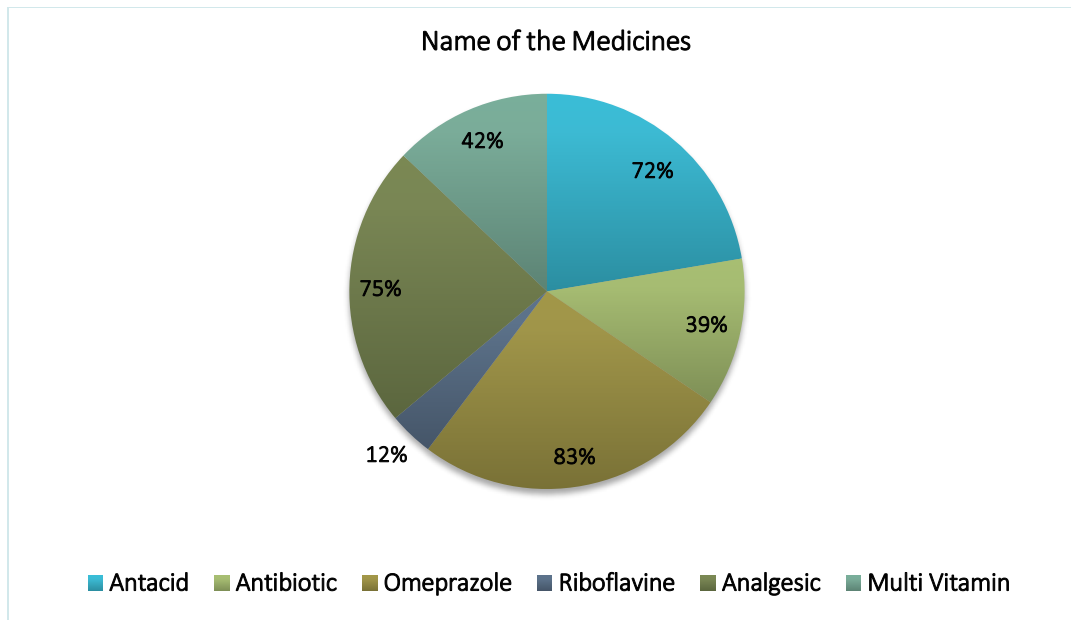


Figure 4.11: Name of the medicines purchased without Prescription.

This survey was done among **350** people. At the end of the survey we found **six** major medicines which was mostly used by the respondents.

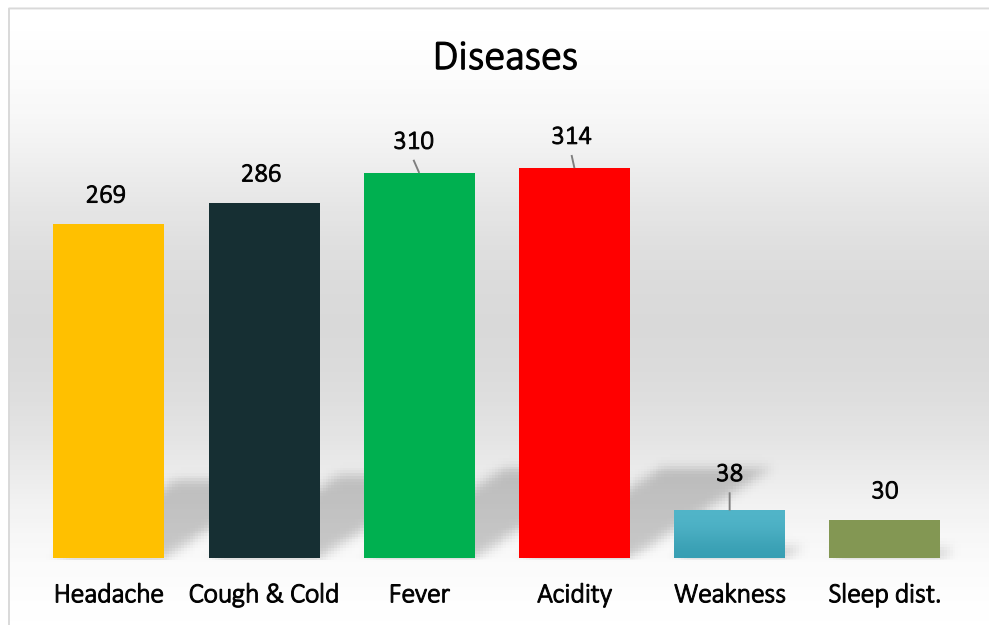
- A. 252** respondents (**72%**) purchased **Antacid tablets, suspensions** without prescription
- B. 137** respondents (**39%**) purchased **Antibiotics** without prescription
- C. 291** respondents (**83%**) purchased **Omeprazole capsule** without prescription
- D. 41** respondents (**12%**) purchased **Riboflavin tablet** without prescription
- E. 261** respondents (**75%**) purchased **Analgesics and Antipyretics** without prescription
- F. 146** respondents (**42%**) purchased **Multi Vitamin tablets, capsules** without prescription

From this survey data, we can say that Omeprazole capsule was the most purchased medicine without prescription among the 350 respondents. Then Analgesics and Antipyretics was the second most purchased and Antacid tablets, suspensions was the third most purchased medicine without prescription.

4.12 Name of Diseases or Problems respondents took OTC medicines:

Table: 4.12

Name of Diseases	Respondents' Number	Percentage
Headache	269	77%
Cough & Cold	286	82%
Fever	310	89%
Acidity	314	90%
Weakness	38	11%
Sleep disturbance	30	9%



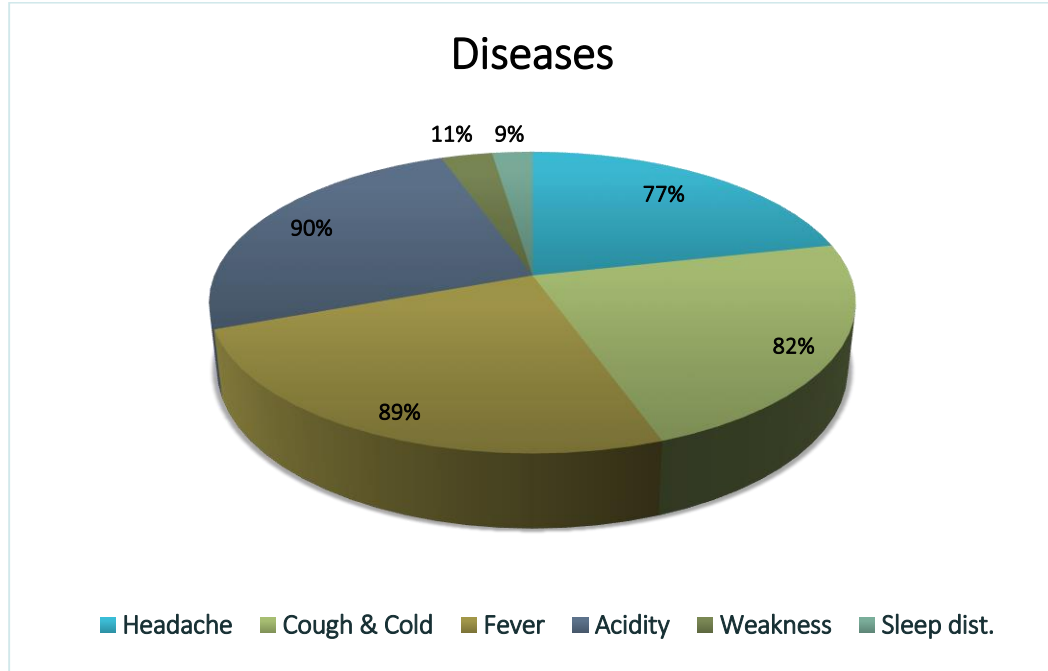


Figure 4.12: Name of diseases or problems.

This survey was done among **350** people. At the end of the survey we found **six** major diseases or problems for which the respondents took OTC medicines.

- A. 269** respondents (**77%**) suffered from **Headache**.
- B. 286** respondents (**82%**) suffered from **Cough & Cold**.
- C. 310** respondents (**89%**) suffered from **Fever**.
- D. 314** respondents (**90%**) suffered from **Acidity**.
- E. 38** respondents (**11%**) suffered from **Generalized Weakness**.
- F. 30** respondents (**9%**) suffered from **Sleep Disturbance**.

Chapter 5

Discussion & Conclusion

Discussion

In the present study, **99%** percent of the pharmacy students of East West University, Bangladesh is self-prescribed. Among the respondents, during this study it was found that **140** respondents were Male and **210** respondents were Female. In percentage, **40%** were Male and **60%** were Female. The total respondents were **350**. **74** respondents (**21%**) were aged between 15-20 years, **268** respondents (**77%**) were aged between 21-25 years and rest of the **8** respondents (**2%**) were more than 25 years of age. **189** respondents (**54%**) were weighed between 40-60 Kg, **156** respondents (**45%**) were weighed between 61-80 Kg and rest of the **5** respondents (**1%**) were more than 80 Kg. Among the respondents, **81%** were from middle class background. Most of them purchased medicine for themselves or for their parents without any prescription from authorized practitioners. Among the respondents, during this study it was found that **31** respondents (**9%**) purchased medicine >3 times, **116** respondents (**33%**) purchased 2-3 times, **201** respondents (**57%**) purchased once in a month and **2** respondents (**1%**) did not purchase any medicines in the last six months. But the result of regular health checkup was below par from expectation as the survey was conducted on pharmacy students. Only **57%** did have regular health checkup. Among **350** respondents, **169** respondents did face adverse drug effect and **181** respondents did not face adverse drug effect.

From this survey data, we can say that Omeprazole capsule (**89%**) was the most purchased medicine without prescription among the 350 respondents. Then Analgesics and Antipyretics (**75%**) was the second most purchased and Antacid tablets, suspensions was the third most purchased medicine without prescription.

Self-prescription is good for quick cure but it is not always good to follow self-prescription procedure again and again. As the survey was conducted on the students of pharmacy, East West University, Bangladesh, they have knowledge about medicine that's why **99%** did follow self-prescription method in their life, but it should be discouraged because they are not diagnosis expert.

Conclusion

The questionnaire employed to assess self-medication was useful to characterize the present sample, the pattern of medication use, and the level of medication knowledge. Even though the prevalence of self-medication was high in this student sample.

Factors such as being male, having average or poor medication knowledge significantly influenced self-medication, as protection factors. Illicit drug use and the existence of a home pharmacy were risk factors for self-medication. Acetaminophen was the most usually employed medication, especially to treat headaches, colds, sore throat, and fever.

Most students, and especially healthcare students, discouraged their friends and relatives from self-medicating. Cultural inheritance is considered to be an important way of transmitting knowledge; it is therefore necessary to incorporate cultural practices that encourage the safe use of medication.

In summary, the fact that being a healthcare student was associated with higher medication knowledge, but not with less self-medication, suggests that medication knowledge might contribute to increase self-medication. This should be taken into account when designing educational interventions relating to self-medication.

Chapter 5

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