

## SELF-MEDICATION AMONG DOWNTOWN URBAN POPULATION OF KARACHI, PAKISTAN

Syed Mukkaram Ali\*, Mehreen Fatima, Lubna Ali

Department of Forensic, Dow International Medical College, Dow University of Health Sciences, Ojha Campus, Karachi, Pakistan

### *Abstract*

#### **Keywords:**

*Self-medication, Drugs, Medicines*

**PURPOSE:** To evaluate the prevalence and associated factors of self-medication among urban downtown population of Karachi.

**METHOD:** Study conducted among 2626 participants using random sampling. It was a cross sectional study, conducting in a time span of 14 months from November 2013 till January 2015. A detailed questionnaire was designed to collect the data from urban population of downtown area of Karachi.

**RESULT:** Overall 68.1% of participants practice self-medication which is prevalent among 25 to 35 years of age group. Self-medication was significantly associated with age, gender, residence and socioeconomic status. 66.7% participants were males and 33.3% were females. 69.5% of participants were uneducated having no education, 12% having primary education, 7.5% have attended Madarsas, 6% matric and 5% having college education. Most common complain reported by self medicators were Pain 56.4%, Flu/Fever 21.3%, Colic 8%, Diarrhea 10.3%, allergies 4%. Most of the participants in our study (64.7%) reported allopathic system as most trusted medicinal system. Few people showed trust on homeopathic (18%), Unani system (12%) and Home remedies (5.3%). The general population perceives homeopathy and ayurvedic medication as their own system based on natural constituents and house hold remedies. Paracetamol was reported as most common analgesic used (33.9%) followed by Aspirin/Brufen (20.7%) reported by the mentioned consumers. Day time commonly asked medicine were Pain killers (58%) and sleeping preparations (62.6%) are commonly asked in night time. Common medical problems found in females were Anemia (33%), Ca/Vit D Deficiency (31%), Low blood pressure (29%). Common medical problems found in males were High blood pressure (41.6%), Back ache (28%), Skin Infections (19.7%) etc. Common medical problems in children's were Chest Infections (41.7%) and Diarrhea (29.3%) and Malnutrition (18.4). In conclusion self medication is increasing in all age groups and many people are using this term wrongly through self diagnosis which is a serious problem.

### **Introduction**

Pakistan is a high risk country for many diseases specially HIV, Dengue, Malaria, breast cancer etc. The major problem is the awareness and education about these diseases to common people. Most of the people do not care about their health and visit to physician when the symptoms of disease are unbearable. They even do not follow the laboratory test recommendation due to unaffordable cost as Pakistan is low income country (WHO 2005) and become self medicator. Self-Medication is defined as the use of drug to treat self-diagnosed disorders or continuous use of prescribed medicines without proper prescription or doctor's advice (Asseray, N. et al., 2013). In third world countries people try to treat themselves by self-medication for minor illness or chronic problem. The prevalence of self-medication among downtown urban population of Karachi has not been widely studied. The objective of the study was to determine the prevalence and associated factors of self-medication among uneducated downtown population of Karachi. The prevalence of self-medication increases after 1980 when World Health Organization

declared some drugs as safe without prescription to reduce the load on doctors but the increasing percentage of self medicators is a matter of concern as it is revealing many adverse effects which is one of the major cause of drug resistance among pathogens (Baig, Q.A., et al., 2012). There is a direct relation was found between drug use and resistance in pathogens (Sturma, A.W., et al., 1997). Patients have their own beliefs and thoughts, they make their own decisions. Patients for minor illness avoids a doctor and take advice from a pharmacist who is not even a qualified pharmacist and simply a salesman having primary school qualification. The patient takes information and process it in his own way, what suits them and starts self-medication. (Chang F.R., Trivedi P.K. 2003).

## Methodology

Study conducted among 2626 participants using random sampling. The area of the study selected was union council 2 of Karachi having approximately 60,000 population where the flow of people from sadder town and Lyari town was found higher. It was a cross sectional study, conducting in a time span of 14 months from November 2013 till January 2015. A detailed questionnaire was designed to collect the data from urban population of downtown area of Karachi.

A total of 2626 people were randomly included in this study who came at any one of the six medical stores in the area of study. The questionnaire was made available to six dedicated certified medical stores (3 of which are 24 hours pharmacy). Prevalence of self-medicines was evaluated by giving ten questions and the participants were asked to tick the appropriate answer or was assisted by the manager of the pharmacy. The questionnaire was divided into three parts. The first part assessed the demographic details of participants, the second part assessed the prevalence and practice of medication while the last section dealt with attitude of participants towards self medication. In questionnaire all ethical requirements including informed consent and confidentiality were ensured.

## Results

Overall 68.1% of participants practice self-medication prevalent having 25 to 35 years of age group. Self-medication was significantly associated with age, gender, residence & socioeconomic status. 66.7% were male and 33.3% were female. Figure no. 01 is showing the percentage of literacy among self medicators. It was found that 69.5% of them are illiterate. Among 30.5% educated self medicators, 12% have primary level education, 6% are matric, 5% college and 7.5% are going Madaris.

Figure no. 2 is showing bar graph of complains reported by self medicators to pharmacist. The highest percentage was found for pain which is 56.4% then Flu/Fever 21.3%, colic 8%, diarrhea 10.3% and allergies were 4%.

Figure no. 3 is showing the percentages of medication systems adopted by self medicators. It was found that 64.7% follow allopathic system of treatment while 18% follow homeopathic system, 12% follow unani medicines and 5.3% believe on homemade remedies (Totkay).

Figure no. 4 is showing the percentage of commonly used analgesics according to the knowledge of self medicators. The percentages are paracetamol 33.9%, Aspirin/Brufen 20.7%, Arinec 17.5%, Augmentin 15.7%, Antacids 6.2%, Herbal products 4% and pills for indigestion 2% .

Figure no. 5 is showing the percentage of commonly used drugs by self medicators during day time and night time. It was observed that 58% of drugs asked by self medicators during day time were pain killers while 32.6% were antiallergics. During night time 62.6% drugs asked were sleeping pills and 29.7% were antispasmodics.

Table no. 1 is showing the percentage of medical problems observed by pharmacist in self medicators. It was observed that 33% of adult females are anemic, 31% had Ca/Vitamin D deficiency, 29% complained for low blood pressure while in case of adult male 41.6% had high blood pressure, 28% complained for bach ache. 19.7% reported skin infection. In children it was observed that chest infection was 41.7%, diarrhea 29.3%, malnutrition 18.4%. In old age male it was found that 58.2% were diabetic, 22.7% had joint pain and 15.6% had high blood pressure. As compare to male, 58.8% osteoporosis was observed in old age female. Beside this 22.8% females were diabetic and 15% had malnutrition.

## Discussion

Study demonstrates that about 68.1% of population in specified area of Karachi self-medicate. In Pakistan except few almost every pharmacy sale drugs to costumer without prescription.

Self-medication has become a worldwide matter and a lot of research is going on to find the prevalence in different countries ranging from developing countries to developed countries. It was estimated in Europe as 68% (Bretagne, J.F. et al., 2006), variable but much higher in developing countries. In Kuwait 92% prevalence of self-medication

was observed in adults. In the surrounding of Pakistan the prevalence of self medication found from the literature was as in India 31%, Iran 48%, Southern China 47.8%, Nepal 59% and Sudan 48% (Naveed, S. et al., 2014). There are very few studies of this type were done in Pakistan with varying study groups. It is 76% in university students in Karachi, 51% of mothers in Karachi are treating their children without prescription.

This study, prevalence of self-medication was conducted among general population of old Karachi Pakistan. As compared to other cities in Pakistan the study is quite similar. It is higher than few of the neighboring countries because of the educational and sociocultural conditions and methodologies used for determining self-medication may be among the reasons for wide variations (Aqeel, T. et. al., 2014). Unlike other studies which were done mostly on students, this survey revealed a likelihood of self-medication in illiterate compared to literate participants. Educated people can clearly read and understands the label of drugs and can understand the harmful effects of self-medication through they take more medicines but because they can read, they keep to a particular medicine. As we did not make any selection in the self medicators, our results are not in accordance with various studies which showed that the self medication is higher in literate people as compare to illiterate (Verma, R.K. et. al., 2010). Our data is showing inverse relation between education level and prevalence of self medication. Highest percentage of self medicator report pain in different body areas which is in accordance with another study done in Rawalpindi, Pakistan (Nasir, M.A. et. al., 2012) and other European countries (Harald, B. et al., 2006). Other common complains were Flu/Fever (21.3%), Diarrhea (10.3%), Colic (8%) and allergies (4%). The most commonly asked analgesic according to self medicators is paracetamol. Although other analgesics are available but due to the publicity on televisions and in news papers, paracetamol (commonly known as sher wali goli) is more famous. Analgesics are the most commonly used over the counter medicines (Aqeel, T. et. al., 2014) but its overuse may be drastic. According to center of disease and control, Painkillers usually bind to receptors present in brain causing euphoric effect and short of breathing so some people get addiction and use overdoses which causes breathing to slowdown resulting in death (CDC, 2011). Around 15.7% people in our study asked Augmentin as pain killer which is actually an antibiotic and is being used abundantly without prescription and in improper doses. Self medication with erroneously taking antibiotics is causing antibiotic resistance specially in Asia (Shah, S.J., 2014). There are various systems of medication are being used all around the world and every system has its own importance in specific diseases (Chatterjee, et. al., 2012). When a person is in trouble, anything which gives calm is of great importance. People rush to find remedy of their disease in any system of medicine. In this study we found that 64.7% of population use Allopathic system of medication, 18% follow homeopathic system, 12% Unani and around 5.3% use homemade remedies. These results are in accordance with the studies done in Islamabad, Pakistan (Aqeel, T., 2014) and South Indian city (Kulkarni, P.K., 2012).

## Conclusion

Self medication is helpful in some cases according to World Health Organization but this decision is mistakenly accepted as good to treat various disease and to lower the burden on doctors (Shah, S.J. et. al., 2014). Majority of the people are becoming self medicator in all around the world and there is a need of taking serious action against the misuse of the term self medication. It is not only the wastage of resources and money but also the most important thing life. It was truly said by Albert Einstein that “A little knowledge is a dangerous thing”. ]

## References

1. Aqeel T, Shabbir A, Basharat H, Bukhari M, Mobin S, et al. Prevalence of Self-Medication among Urban and Rural Population of Islamabad, Pakistan. *Trop J Pharm Res*, 2014, 13(4): 627-633.
2. Asseray N, Ballereau F, Trombert-Paviot B, Bouget J, Foucher N, Renaud B, et al. Frequency and severity of adverse drug reactions due to self-medication: a cross-sectional multicentre survey in emergency departments. *Drug Saf*. 2013; 36(12):1159-68.
3. Baig QA, Muzaffar D, Afaq A, Bilal S and Iqbal N. Prevalence of self medication among dental patients. *Pakistan Oral and Dental Journal*. 2012;32(2): 292-295.
4. Breivik H, Collett B, Ventafridda V, Cohen R, Gallacher D. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. *Eur J Pain*. 200 ;10(4):287-333.
5. Bretagne JF, Richard Molyoivd B, Honnorat C, Caekaert A, Barthelemy P. [Gastroesophageal reflux in the French general population: national survey of 8000 adults]. *Presse Med* 2006; 35: 23-31.

6. CDC. Vital Signs: Overdoses of Prescription Opioid Pain Relievers—United States, 1999-2008. *MMWR* 2011; 60: 1-6
7. Chang FR, Trivedi PK. Economics of self-medication: theory and evidence. *Health Econ.* 2003 ;12(9):721-39.
8. Chatterjee B, Biswas PC, Pancholi J. Health awareness and popularity of alternative medicines among people of Jamnagar town: A cross - sectional study. *Ayu.* 2012;33(1):33-37.
9. Kulkarni, PK. Khan M, Chandrasekhar, A. Self medication practices among urban slum dwellers in South Indian city. *Int J Pharm Bio Sci.* 2012; 3(3): 81-87.
10. Nasir MA, Hashmi RI, Ahmad NS. Drug utilization patterns in Rawalpindi and Islamabad, Pakistan. *J Pak Med Assoc.* 2012 ;62(5):426-9.
11. Naveed S, Ishaq H, Ali B, Arshad H, Maryam M and Pervaiz S. The prevalence of self medication in Karachi. *World J Pharm Sci.* 2014; 2(5): 479-484
12. Shah SJ, Ahmad H, Rehan RB, Najeeb S, Mumtaz M, Jilani MH, et al. Self-medication with antibiotics among non-medical university students of Karachi: a cross-sectional study. *BMC Pharmacol Toxicol.* 2014;15:74.
13. Sturm AW, van der Pol R, Smits AJ, van Hellemond FM, Mouton SW, Jamil B, et al. Over-the-counter availability of antimicrobial agents, self-medication and patterns of resistance in Karachi, Pakistan. *J Antimicrob Chemother.* 1997 ;39(4):543-7.
14. Verma RK, Mohan L, Pandey M. Evaluation of self medication among professional students in North India: Proper statutory drug control must be implemented. *Asian J Pharm Clin Res.* 2010;3:60-4.
15. World Health Organization. Preventing chronic diseases : a vital investment : WHO global report. 2005; Switzerland

FIGURES AND TABLE

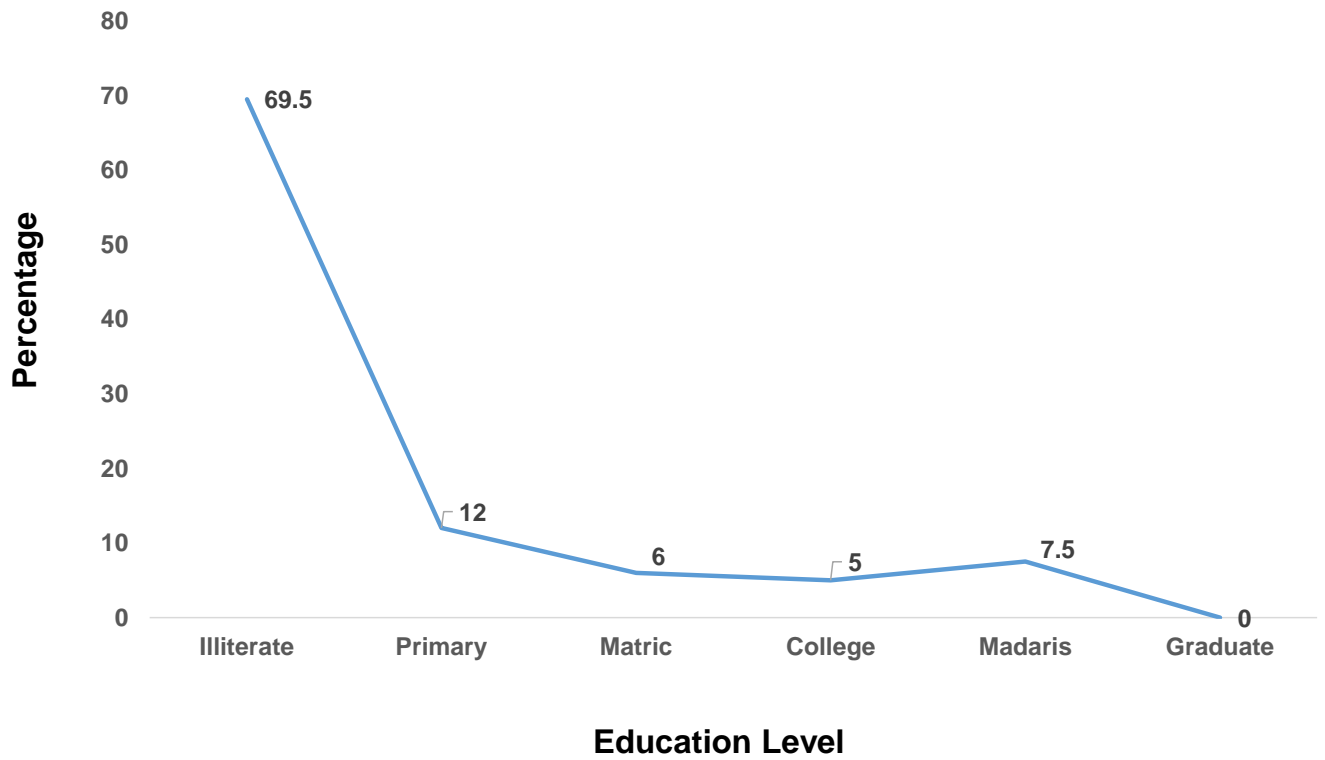
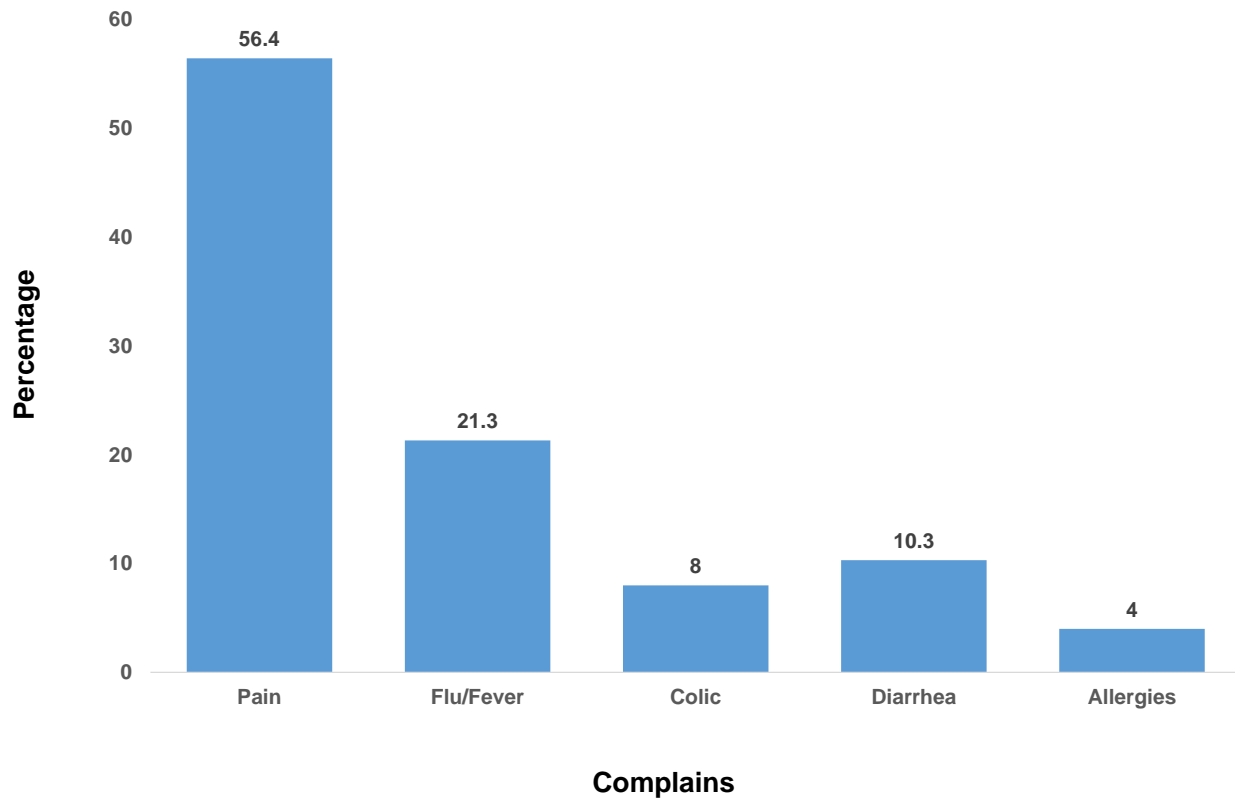
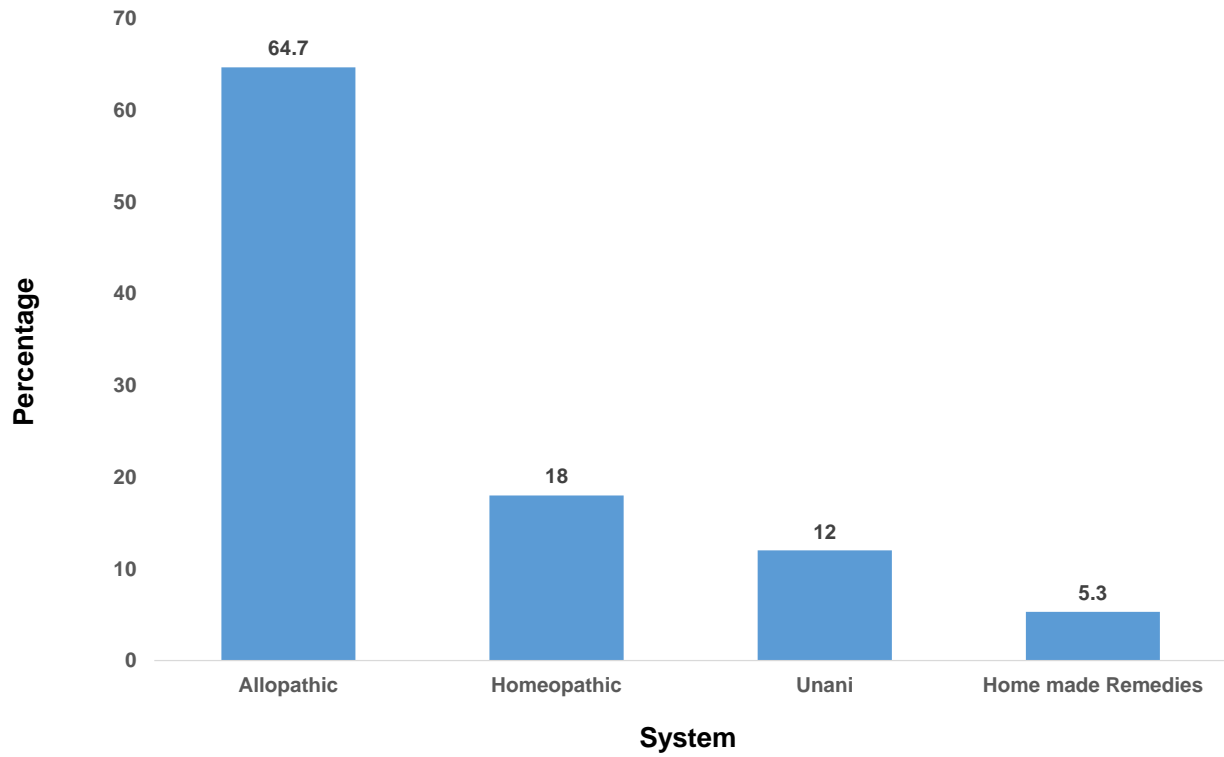


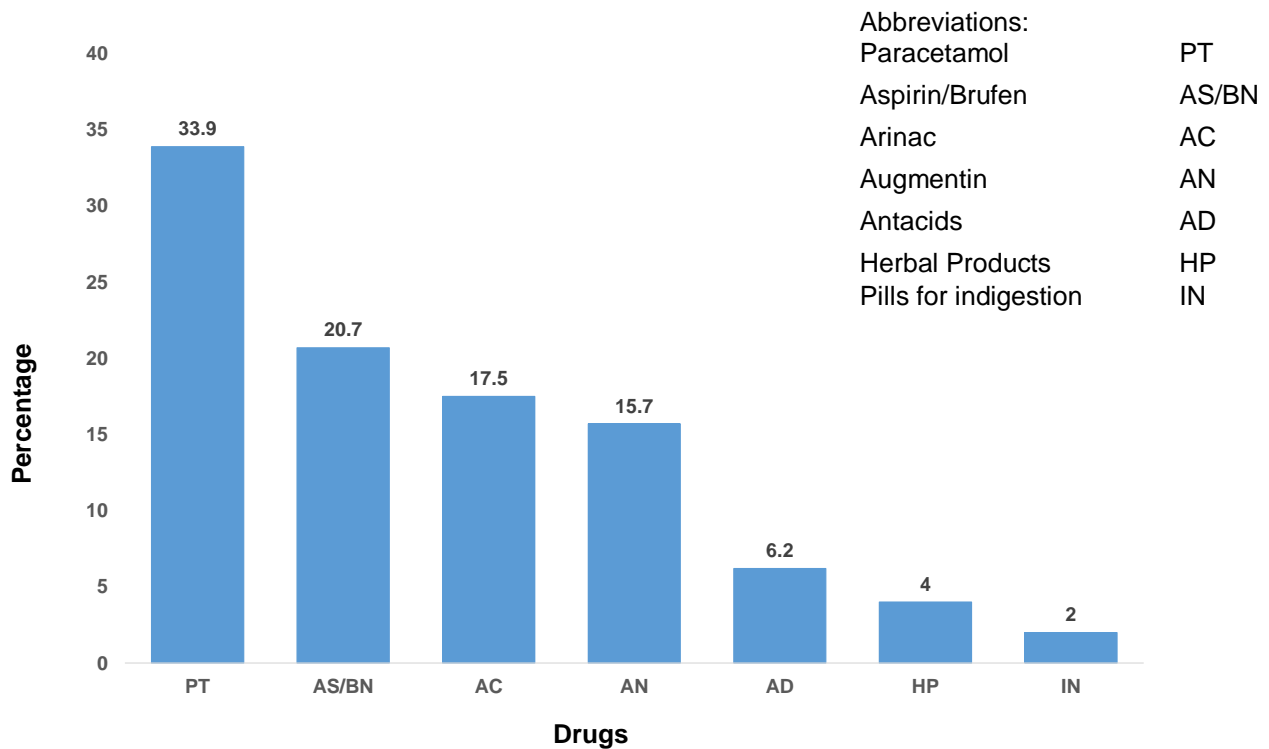
Figure: The graph showing the percentage of self medication among people of different education level.



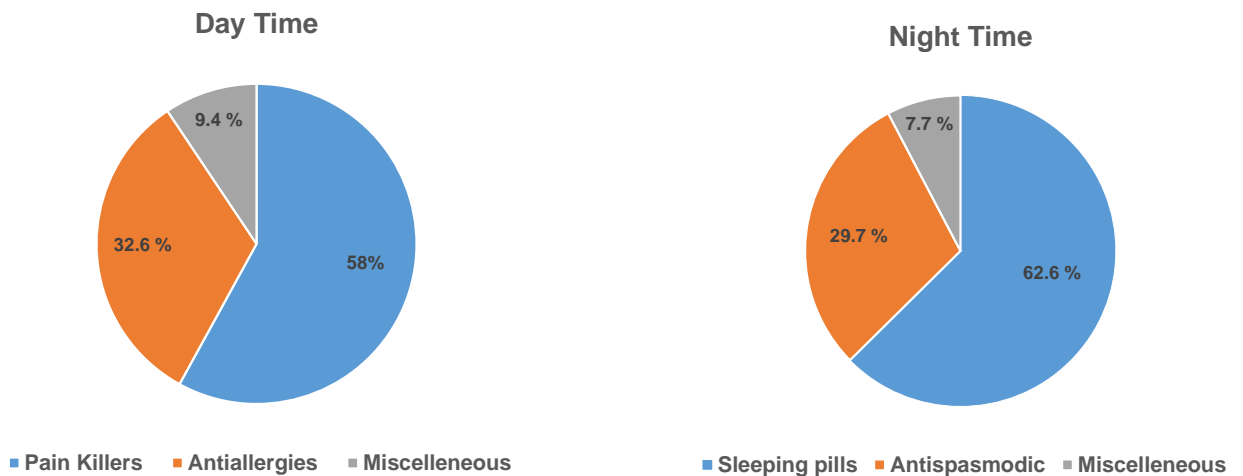
**Figure:** The bar graph showing the percentage of common complains reported by self-medicators



**Figure:** The bar graph showing the percentage of medication systems adopted by self medicators.



**Figure:** The bar graph showing the percentage of commonly used analgesics according to knowledge of self-medicators.



**Figure:** The pi chart showing the percentage of commonly used drugs by self-medicators during day time and night time