



Self-medication practices among patients presenting to Medicine OPD in a tertiary care hospital, AIIMS-Patna (Bihar)

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Introduction

Generally speaking, self-medication is defined as "the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms without a valid prescription. Self-medication is a global phenomenon⁴. Families, friends, neighbours, the pharmacist, previous prescribed drugs, or suggestions from an advertisement in newspapers or popular magazines are common sources of self-medications. Major problems related to self-medication are wastage of resources, increased resistance of pathogens and it causes serious health hazards such as adverse reaction and prolonged suffering. Antimicrobial resistance is a current problem world-wide particularly in developing countries where antibiotics are available without any prescription. In India, it is very common to see self-medication practice and is an emerging challenge to health care providers.⁶

Aim & Objectives

- To assess the pattern and different aspects of self medication among patients presenting to Medicine OPD

- To find out the drugs & disease for which commonly self medication is practised in our region
- To find out their source of information about drugs used by them
- To find out the reason for their self medication.

Material and Methods

Type of study: A cross-sectional questionnaire-based study was used among the patients.

Place of study: Outpatient services, Deptt of Medicine, AIIMS-PATNA.

Time-period: Six Months (November 2017 – March 2018.)

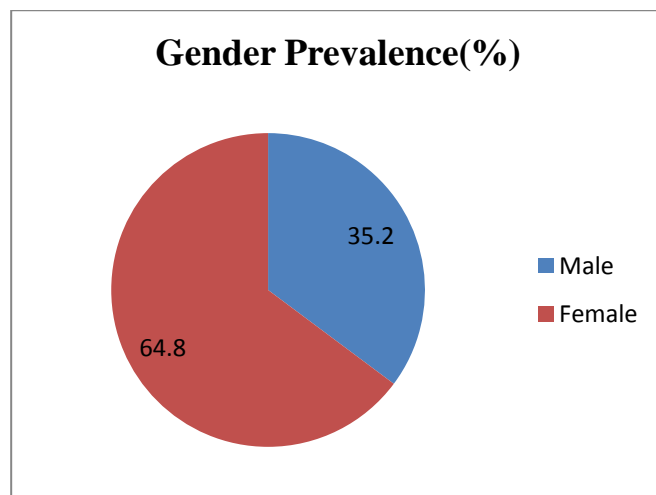
Inclusion criteria: Patients presenting to Medicine OPD, who gave history of using modern (allopathic) medicine on their own.

Methods: A total of 500 patients were included in this study presenting to medicine OPD. A standardized questionnaire was used for patient interaction. All data were collected by the investigators (doctors) of the department who had been familiarized adequately with the questionnaire.

Results

A total of 500 patients were included in this study. Out of total 500, males accounted for 35.2% (n=176) and females were 64.8% (n=324). Most of them said they purchased medicines from pharmacists (71%;n=355), followed by friends or relatives (16%;n=80), internet search (8.2%; n=41), other sources(4.8%;n=24). Majority of them reported to have taken medicines for a period of 1-2 weeks(46%), followed by 1 wk duration (37%), 2-4 wk duration(12.8%), >4 wk duration (4.2%). Most of the people practicing self medication were adolescents and middle age group. 24% people belonged to 16-30 yrs,38% in 31-45 yrs,25% in 46-60 yrs and 13% in >60 yrs. While, there was no gender significance in older age group but females were more common in middle age group. On enquiring about most common sickness for which medicine was taken, gas formation, belching, dyspepsia took the lead accounting for 45.2% (n=226), body pain & headache (37%;n=185), weakness (23%;n=115), fever (13%;n=65), cough & cold (15%;n=75), diarrhoea/loose stools (8.4%; n=42), nausea & vomiting (17%;n=85), skin problems (8.2%;n=41), Eye & Ear problems(3.8%;n=19), others (11%; n=55). Coming to the common drugs that were used by these people were Anti ulcer, mainly H2 blockers and PPIs, accounting for 45.2% (n=226), Antipyretics & analgesics-41.2% (n=206),

antibiotics-32% (n=160), multivitamins (19%); n=95), Antihistaminics-14.4%(n=72), antihelminthics (4.8%;n=24) On asking about antibiotic resistance 31.4% (n=157) people said they were aware about it while 343 (68.6%) people had no idea of it. Similarly, on enquiring about rational drug usage only 1.2% had an idea about it. When asked about the reason for self medication, 25% said they used it for quick relief.51.6% said they considered their illness too trivial for consultation to a doctor.19% said they were reluctant to spend money for doctor’s fee or lab charges.13% said it was time saving and they wanted to avoid excessive crowd or long queue at the hospital while 6.8% sighted lack of healthcare personnel for their self medication reason.

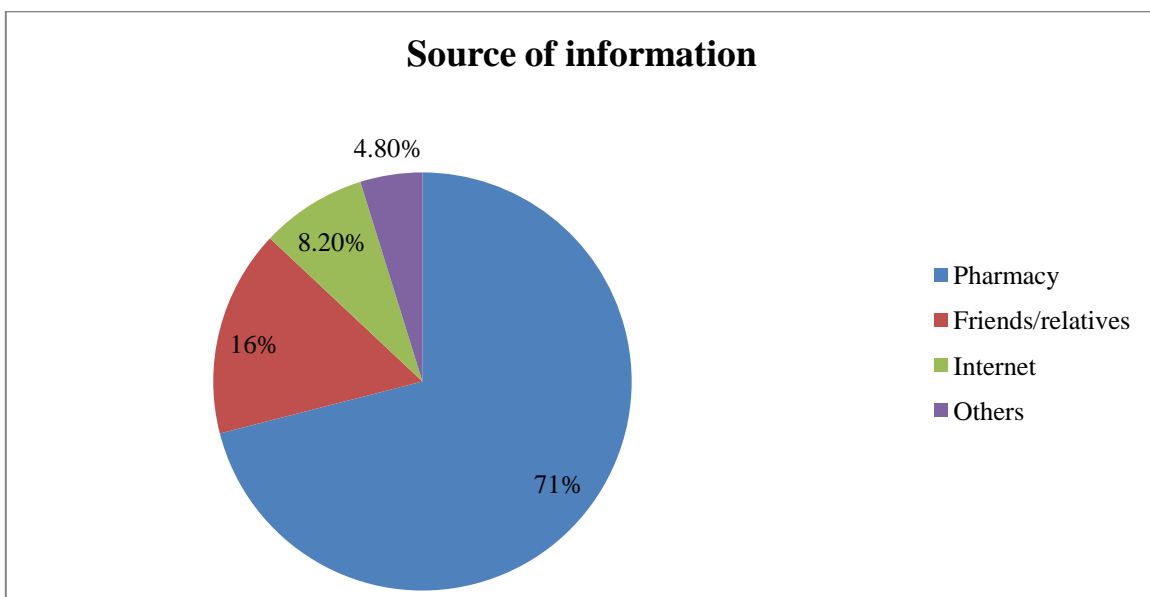
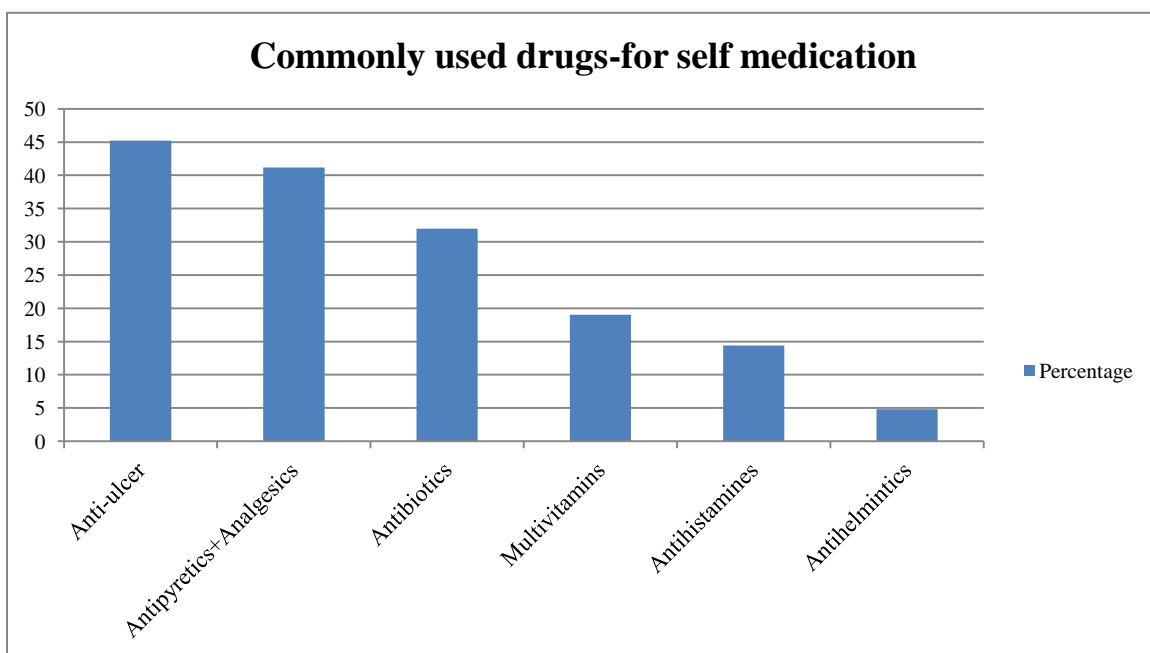
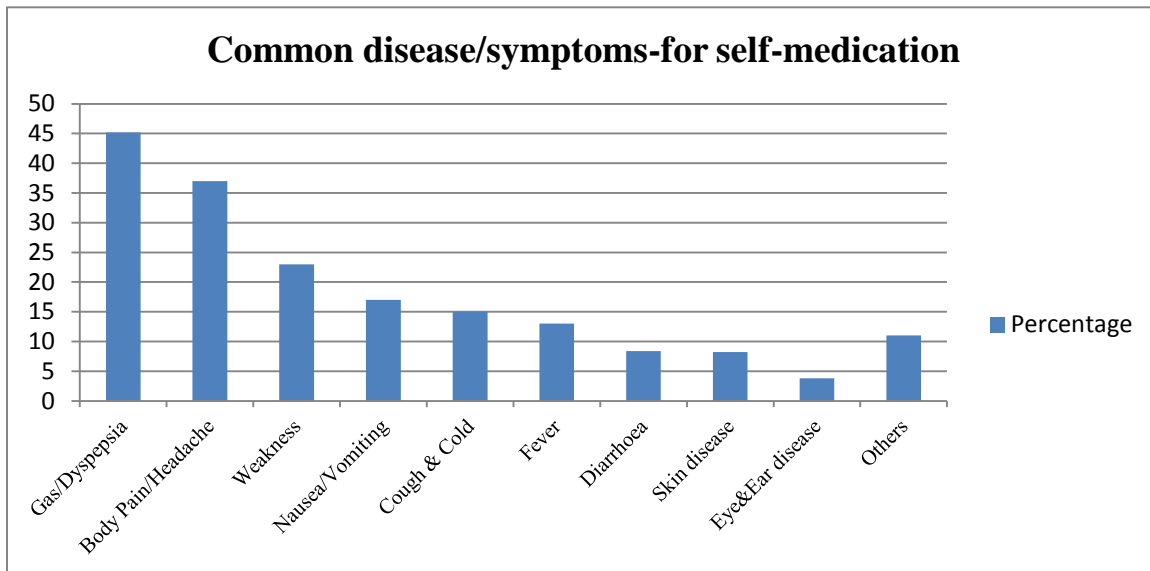


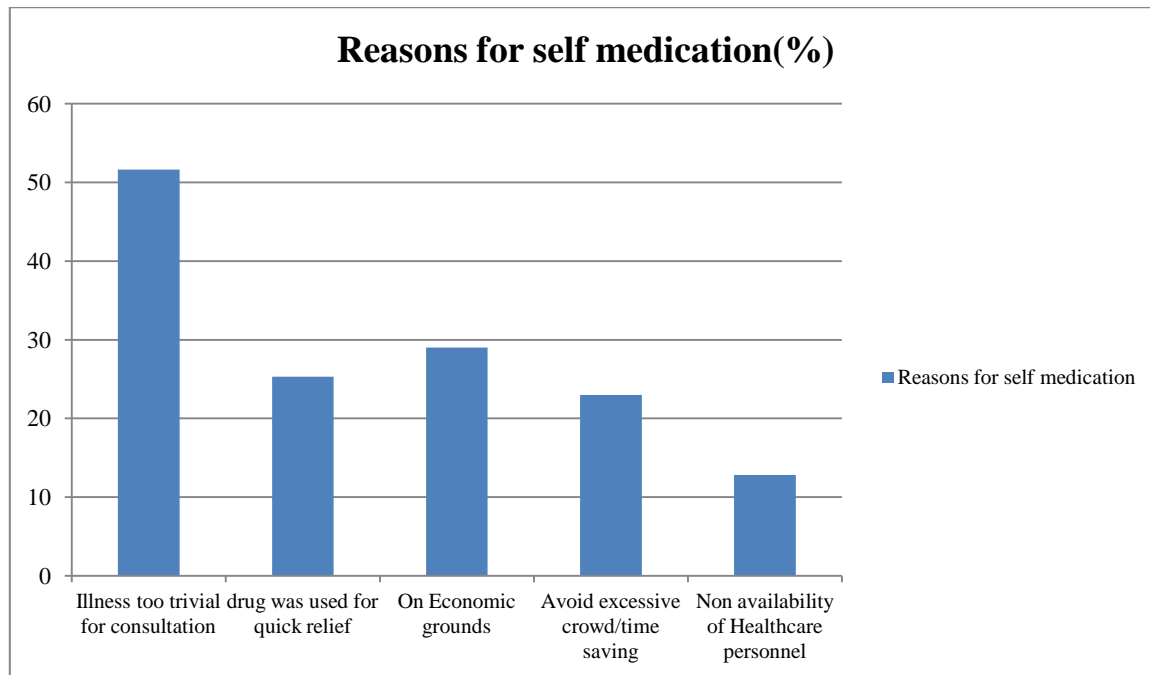
Duration

Duration in wks	<1 wk	1-2 wks	2-4 wks	>4wks
Number	185	230	64	21
Percentage	37%	46%	12.8%	4.2%

Age Group

Age Group	Number	Percentage
16-30 Yrs	120	24%
31-45 Yrs	190	38%
46-60 Yrs	125	25%
>60 Yrs	65	13%





Discussion

This study was carried out at AIIMS, Patna among patients visiting to Medicine OPD. An attempt was made to find out the reasons as to why people indulge in self medication and how grave the situation is in our society. Various Studies carried out on self-medication states that it is very common practice, especially in economically deprived communities and developing nations.⁹ Now-a-days health care services are getting costlier in developing countries and health care facilities are not adequately available. Hence, in this situation self-medication becomes an obvious choice for people.⁸ In addition, lax medical regulation has resulted in the proliferation of counter free drugs that are in high demand for the treatment of highly prevalent diseases.¹⁹

Although there are few advantages of self medication but disadvantages are of much more concern, both at individual and national level. Advantages were seen in the form of -Saving scarce medical resources from being wasted on minor conditions, Reducing absenteeism from work due to minor symptoms and Reducing the pressure on medical services where health care personnel are insufficient. But disadvantages in the form of Incorrect self-diagnosis, Failure to seek appropriate medical advice promptly,

Incorrect route of administration, Inadequate or excessive dosage, Risk of dependence and abuse, drug allergy, antibiotic resistance wasteful public expenditure, are of much more concern.^{16,27}

Out of 500 respondents not a single respondent had proper knowledge about complete profile of the drug which was taken up for self medication practice. They were not even properly aware of the dose of drug, duration of therapy, toxic dose of drug, active constituents, indications and side effects of commonly used medicine like Paracetamol, Ranitidine, PPIs etc.²⁷

Almost one out of every two patient gave history of self medication in recent past. Based on this prevalence rate of self medication was found to be approximately close to 37.4%. We found this to be similar to various national and international research studies where prevalence rate of self medication varies from 12.7% to 95%^{4,31}.

A study by Hajira Saba et al at bengaluru prevalence rate of self medication was found to be 40.5%, whereas a study in West Bengal revealed the prevalence of 57.05% and another in Mangalore found it to be 78.6%.³² Researches outside India found the prevalence of self-medication varying from 43.24% reported in Mekelle University, 50.9% in a study in Saudi Arabia and even higher in a study in Serbia

(79.9%) and in a study conducted in Chitwan Medical College, Bharatpur, Nepal (84%).^{25,34} Since the characteristics of the study population and the health-care systems differ from country to country, results cannot be compared.

The results of our study indicated that females were more involved in practicing self-medication. Some of the reasons might be that most of them were housewives, had to depend on some male members to accompany them to a doctor or hospital.^{1,2} Rural background and illiteracy could be also one of the reasons for higher female prevalence. In other studies, the influence of gender on self-medication practice was inconclusive. In a study conducted in West Nepal males practiced self-medication more compared with females²⁶. In another study conducted in Erode, South India; it was reported that both genders practiced self-medication to an equal extent.²⁸

Highest proportion of subjects who practiced self-medication in our study were aged between 25-45 years. This finding was similar from other studies conducted at Erode, South India where the highest prevalence of self-medication was among respondents aged 26-40 years, at Nepal where the highest prevalence of self-medication was among respondents aged 20-39 years and Hong Kong where the highest prevalence of self-medication was among respondents aged 15-49 years.^{28,26,29}

Our results indicated that most common source from where the respondents got information about the choice of drug for practicing self-medication was pharmacy(71%), followed by friends(16%), internet, old prescriptions, advertisement in newspapers or popular magazines are common sources, etc. . These results were similar to the studies conducted in east Hong Kong, rural north India and in Erode, South India.^{29,30,28} Most common drug used for self medication turned out to be Anti-ulcer (45.2%) mainly, Ranitidine and Pantoprazole. Next, it was analgesics and antipyretics (41.2%) mainly for fever, body pain & headache. Use of antibiotics was also significant. But, surprisingly majority of them

were not aware about antibiotic resistance and Drug rational usage. We, feel this as an important reason for increasing drug resistance among the population. On asking about the reason most people accepted that they considered their illness too trivial for consultation to a doctor or hospital. These findings were similar to those conducted by Mehta et al.³³ Many of them (51.6%) were confident that swallowing a pill from pharma shop would cure them. Nearly 25% of them took medicines for quick relief, 19% said they were reluctant to spend money for doctor's fee or lab charges. 13% said it was time saving and they wanted to avoid excessive crowd or long queue at the hospital while 6.8% sighted lack of healthcare personnel for their self medication reason. These findings were also found to be consistent with other researches.

Then this study is also not without limitations:

- 1) Its cross-sectional nature does not permit causal inferences. The data were based solely on self-report which increases the chances of recall bias. Recall period was- 'ever used self medication' and since there was no fixed short duration, there could be memory bias in occasional users.
- 2) Access to health care issues like distance to health facilities or pharmacies, could not be addressed in details in this study.
- 3) This study was restricted to use of self-medication to allopathic drugs only. Other modes like homeopathy, ayurvedic, unani etc were not taken into account. We found that medications of other systems of medicine were also very rampant in use which necessitates further research and study.
- 4) Other issues like economical, financial, literacy rate, Rural & Urban population also needs to be considered with fine details.

Conclusion

Self-medication is an alarming concept. This review focused on the self-medication of allopathic drugs, their use, its safety and reason

for using it. It would be safe, if the people who are using it, have sufficient knowledge about its dose, time of intake, side-effect on over dose, but due to lack of information it can cause serious effects such as antibiotic resistance, skin problem, hypersensitivity and allergy. Hence, developing country like India where we have poor economic status, education status as well as poor health care facilities, Health education of the public and regulation of pharmacies may help in limiting the self-medication practices. There is need to ensure community education, safety and efficacy of OTC drugs, so that even after its improper use, they prove to be safe. Easy availability of OTC drugs is a major factor responsible for irrational use of drugs in self-medication resulting in impending health consequences like antimicrobial resistance, increased load of morbidity and economic loss. The need for promoting appropriate use of drugs in the health care system is not only for financial reasons, with which policy makers and managers are usually most concerned, but also for health and medical care of patients and the community. Since self medication is at an alarming pace, education of the people to ensure safe practices is the need of the hour. Measures must be taken to discourage such practices and awareness must be created among general people.

References

1. Banerjee I, Bhadury T. Self-medication practice among undergraduate medical students in a tertiary care medical college, West Bengal. *J Postgrad Med*. 2012;58:127–31. [PubMed]
2. Kumar N, Kanchan T, Unnikrishnan B, Rekha T, Mithra P, et al. Perceptions and Practices of Self-Medication among Medical Students in Coastal South India. *PLoS ONE*. 2013;8(8):e72247. [PMC free article] [PubMed]
3. Klemenc-Ketis Z, Hladnik Z, Kersnik J. A cross sectional study of sex differences in self-medication practices among university students in Slovenia. *Coll Antropol*. 2011;35:329–34. [PubMed]
4. World Health Organization: Guidelines for the regulatory assessment of Medicinal Products for use in self-medication 2000. Available: <http://apps.who.int/medicinedocs/pdf/s2218e/s2218e.pdf>. [Last accessed on 5 march 2014]
5. Saeed MS, Alkhoshaiban AS, Al-Worafi YM, Long CM. Perception of self-medication among university students Saudi Arabia. *Arch Pharm Pract*. 2014; 5(4): 149–152.
6. 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;5:217–20. [PMC free article] [PubMed]
7. Lukovic JA, Miletic V, Pekmezovic T, Trajkovic G, Ratkovic N, et al. (2016) Self-Medication Practices and Risk Factors for Self-Medication among Medical Students in Belgrade. *PLoS ONE* 2: 240-253
8. Nithin K, Bhaskarn U (2016) Perception and practice of self-medication among medical students in coastal south India. *IJEIMS* 8: 231-235.
9. Mohamed Azhar MI, Gunasekaran K, Kadirvelu A, Gurtu S, Sadasivan S (2015) Self-medication: awareness and attitude among Malaysian urban population. *IJCRIMPH* 2: 500-560.
10. Gyawali S, Shankar PR, Poudel PP, Saha A (2015) Knowledge, attitude and practice of self-medication among basic science undergraduate medical students in a medical school in Western Nepal. *J Clin Diagn Res* 2: 1-2.
11. Geissler PW, Nokes K, Prince RJ, Achieng RO, Aagaard-Hansen J, Ouma JH. Children and medicines: Self treatment of common illnesses among Luoschool

- children in western Kenya. Soc Sci Med. 2000;50: 1771-1783.
12. Hussain S, Malik F, Hameed A, Ahmad S, Riaz H. Exploring health seeking behavior, medicine use and self-medication in rural and urban Pakistan. South Med Rev. 2010; 3(2): 32–35.
 13. Awad A, Eltayeb I, Matowe L, Thalib L. Self-medication with Antibiotics and Antimalarials in the Community of Khartoum State, Sudan. J Pharm Pharm Sci. 2005; 2(8):326–331.
 14. Afolabi AO. Factors influencing the pattern of self-medication in an adult Nigerian population. Ann Afr Med. 2000; 7(3): 120–127.
 15. World Health Organization. The Role of Pharmacists in Health Care System. [Internet]. 1998. Available from: World Health Organization. 1998. Available from: <http://www.apps.who.int/medicinedocs/en/d/Jwhozip32e> [last accessed on Apr 25, 2009].
 16. Banerjee I, Bhadury T. Self-medication practice among undergraduate medical students in a tertiary care medical college, West Bengal. J Postgr Med. 2012;58(2): 127–131.
 17. Meaurio G, Temple V, Law F. Prevalence of self-medication among students in Papua New Guinea. Pacific J Med Sci. 2013; 9(1): 17–31.
 18. Hughes CM, McElnay JC, Fleming GF. Benefits and risks of self-medication. Drug Saf. 2001; 24(14): 1027–1037.
 19. Ferris DG, Nyirjesy P, Sobel JD, Soper D, Pavleti CA, Litaker MS. Over-the-counter antifungal drug misuse. Albasheer et al Trop J Pharm Res, October 2016; 15(10): 2259 associated with patient-diagnosed vulvovaginal candidiasis. Obstet Gynecol. 2002; 99: 419–425.
 20. Calabresi P, Cupini LM. Medication-overuse headache: similarities with drug addiction. Trends Pharmacol Sci. 2005; 26(2): 62–68.
 21. Ruiz ME. Risks of self-medication practices. Curr Drug Saf. 2010; 4(5): 315–323.
 22. Alghanim SA. Self-medication practice among patients in a public healthcare system. East Mediterr Heal J. 2011;17: 409–416.
 23. Aljadhey H, Assiri GA, Mahmoud MA, Al-Aqeel S, Murray M. Self-medication in Central Saudi Arabia: Community pharmacy consumers' perspectives. Saudi Med J. 2015;36(3): 328–334.
 24. Ibrahim NK, Alamoudi BM, Baamer WO, Al-Raddadi RM. Self-medication with analgesics among medical students and interns in King Abdulaziz University, Jeddah, Saudi Arabia. Pak J Med Sci. 2015; 31(1): 14–18.
 25. Gutema GB, Gadisa DA, Kidanemariam ZA, Berhe DF, Berhe AH, Hadera MG, Hailu GS, Abrha NG. Self-medication practices among health sciences students: the case of Mekelle University. J Appl Pharma Sci. 2011; 1(10): 183–189.
 26. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: A questionnaire-based study. BMC Fam Pract. 2002;3:17. [PMC free article] [PubMed]
 27. Montastruc JL, Bagheri H, Geraud T, Lapeyre Mestre M. Pharmacovigilance of self-medication. Therapie. 1997, 52 (2): 105-110
 28. Samuel SS, Prakasam KC, Nandhakumar N. Assessment of self-medication among patients attending community pharmacies in Erode, India. Int J Pharm Pharm Sci. 2011;3:258–62
 29. You JH, Wong FY, Chan FW, Wong EL, Yeoh EK. Public perception on the role of community pharmacists in self-medication

- and self-care in Hong Kong. *BMC Clin Pharmacol.* 2011;11:19
30. Ahmad A, Patel I, Mohanta GP, Balkrishnan R. Evaluation of Self Medication Practices in Rural Area of Town Sahaswan at Northern India. *Ann Med Health Sci Res.* 2014;4(2):73–8
31. Figueiras A, Caamaño F, Gestal-Otero JJ. Sociodemographic factors related to self-medication in Spain. *Eur J Epidemiol.* 2000;16:19–26
32. Prevalence of self-medication practices and its associated factors in rural Bengaluru, Karnataka, India ,*Saba HI et al. Int J Community Med Public Health.* 2016 Jun;3(6):1481-1486
33. Knowledge, Attitude and Practice of Self Medication among Medical Students; Mehta etal p-ISSN: 2320–1940 Volume 4, Issue 1 Ver. I (Jan.-Feb. 2015), PP 89-96.