

Self-Medication Practices in Rural Bangalore, Karnataka, India

Sangamesh Nidagundi
Principal, Sri Kalabyraveshwara
Swamy college of Nursing,
Bangalore.

G Balamurugan
Head – Dept of Mental Health
Nursing, Ramaiah Institute of Nursing
Education and Research, Bangalore.

M Vijayarani
Assistant Professor,
ESIC college of Nursing,
Bangalore.

Abstract:-

➤ **Background:** The use of Self-medication among the rural area is increasing due to various factors like socioeconomic factors, lifestyle, previous experience of treating a similar illness, ready access to drugs and the increased potential to manage mild illness through self-care.

➤ **Methods:** A community based cross-sectional study was conducted among adults aged 16 years & above residing in the selected rural area Bangalore, Karnataka, India. Samples were selected using simple random sampling. Totally 110 participants were selected for the study. Data was collected by interview using semi- structured pretested questionnaire. Descriptive statistics was used to calculate the frequency and percentage.

➤ **Findings:** Majority of the participants were between 31-45yrs (44.5%). An overwhelming percentage of 83.6 % were females. The commonest reason for self medication was reported that it is not required to consult physician for minor illness (52.7%). Regarding the source of information for self-medication more than half of the participants 56.3% reported their own experience as source. The common ailments necessitating self-medication in the current study were head ache(83%.6), cold (29.1%), cough(17.3%), acidity(40%), fever(40%), body pain(50%) etc.

➤ **Conclusions:** There is a varying spread of the self medication practices and patterns among the rural areas of India. Easy availability of over the counter (OTC) drugs is a vital factor responsible for the self medication and dependency. People in rural areas need to be encouraged to avail health services from Government which is free of cost.

Keywords:- Self-medication, Patterns, practices, rural population.

I. INTRODUCTION

Self-medication can be defined as obtaining and consuming drugs without the advice of a physician either for diagnosis, treatment or monitoring of treatment.(1) The World Health Organization (WHO) has defined self-medication as

the practice whereby individuals treat their ailments and conditions with medicines that are approved and available without prescription, and which are safe and effective when used as directed.(2) Self-medication can be described as a double edged sword for its users, because it has both beneficial and harmful effects.(3) It includes use of the medication of family members, especially where the treatment of children or the elderly is involved.(2)

Due to lack of knowledge of correct dose, side-effects and interactions could have serious implications, especially in extremes of ages (children and old age) and special physiological conditions like pregnancy and lactation.(4). The practice of self-medication is widespread all over in India especially in urban(5) and rural areas(4)(1). Use of self-medication is highly prevalent in both urban and rural community varying from 32.5% to 81.5%.(4)

The use of Self-medication among the rural area is increasing due to various factors like socioeconomic factors, lifestyle, previous experience of treating a similar illness, ready access to drugs and the increased potential to manage mild illness through self- care. A cross-sectional study was carried out in rural population, Bangalore, Karnataka, India to find out self- medication practices.

II. MATERIALS AND METHOD

The present study was a community based cross-sectional survey conducted among rural population who fulfil the following selection criteria.

➤ **Inclusion criteria:** Participants who were

- greater than 16yrs of age, irrespective of sex.
- those who have the habit of self medication.
- willing to participate.

➤ **Exclusion criteria:** Participants who were

- having psychiatric illness
- severely ill

Totally 110 participants were selected with simple random sampling technique.

The data was collected using the questionnaire prepared by the researchers. Section A: socio demographic details (age,

gender, education, occupation, income, relationship with head of the family, type of family, number of family members, marital status and availability of family physician). Section B: consisted of semi structured questionnaires which includes the details of practice of self-medication, reasons for use of self-medication, source of information and common alignments for which self medication was practiced was collected.

During House-to- house survey, briefing was given about the nature of study, and the procedure of completing the questionnaire was explained. Followed by that informed consent was obtained form from the participants. Data was collected by interview using semi- structured pretested questionnaire. The data were coded and validated.

The results are based upon the data obtained from 110 participants. Data was analyzed using MS Excel 2007. Descriptive statistics was used to calculate the frequency and percentage. Confidentiality of participants was maintained by avoiding any information revealing the identity of the participants in the questionnaire.

III. FINDINGS

➤ *Socio demographic data*

n =110

SI No	Socio demographic variable	Frequency	Percent
1	Age in years		
	16-30 years	28	25.5
	31-45 years	49	44.5
	46-60 years	33	30.0
2	Gender		
	Male	18	16.4
	Female	92	83.6
3	Educational Status		
	No formal education	34	30.9
	Secondary	62	56.4
	PUC	12	10.9
	Diploma	1	0.9
	Degree	1	0.9
4	Occupational status		
	Agriculture	17	15.5
	Private employee	18	16.4
	Business	3	2.7
	Home maker	68	61.8
	Student	1	.9
	Teacher	2	1.8
5	Relation to HoF		
	Head	22	20.0
	Wife	68	61.8
	Son	7	6.4
	Daughter	2	1.8
	Daughter in law	10	9.1
	Grandson	1	0.9

Table 1.1 Socio demographic profile of participants

Majority of the participants were between 31-45yrs (44.5%). An overwhelming percentage of 83.6 % were females. Majority of the participants studied up to secondary education (56.4%) and 30.9% of them did not have formal education .Majority of (61.8%) of the participants were home makers.

n =110

SI No	Socio demographic variable	Frequency	Percent
1	Total number of family members		
	1-3	31	28.2
	4-6	73	66.4
	>7	6	5.5
2	Type of family		
	Joint family	17	15.5
	Nuclear family	72	65.5
	3rd Generation	21	19.1
3	Marital status		
	Married	92	83.6
	Unmarried	7	6.4
	Widow	11	10.0
4	Family physician		
	Yes	5	4.5
	No	105	95.5

Table 1.2 Socio demographic profiles of participants

Majority of the family has 4-6 members in the family (66.4%). An overwhelming percentage of 65.5% lives in a nuclear family. 83.6% percent of the participants were married 95.5% of the participants had no family physician and only 4.5% of them had family physician.

n =110

Sl No	Self-medication practice	Frequency	Percent
1	Reasons for preferring self-medication		
	For minor illness it is not required to consult physician	58	52.7
	Distance to primary health care centre	22	20.0
	Prior experience of self-medication in the family	6	5.5
	Emergency	6	5.5
	Non-availability of the doctors	4	3.6
	Economic condition	4	3.6
	Others(ignorance ,age, lack of time)	3	2.7
	Distance to PHC and Emergency	2	1.8
	For minor illness it is not required to consult physician and Emergency	2	1.8
	Consultation fee of the physician	1	0.9
	Non-availability of the doctors and Distance to primary health care centre	1	0.9
	Economic condition, Distance to PHC and For minor illness it is not required to consult physician	1	0.9
	Non-availability of the doctors and Distance to primary health care centre	1	0.9

Table 2.1 Self-medication practice of rural population

Regarding the reasons for taking self medication participants reported for minor illness it is not required to consult physician(52.7%),reported that distance to pHC (20%), Prior experience of self-medication in the family(5.5%), Emergency(5.5%), Non-availability of the doctors(3.6%), Economic condition(3.6%), Distance to PHC and Emergency (1.8%), For minor illness it is not required to consult physician and Emergency (1.8%), Consultation fee of the physician (0.9%), Non-availability of the doctors and Distance to primary health care centre(0.9%) , Economic condition, Distance to PHC and For minor illness it is not required to consult physician (0.9%) and Non-availability of the doctors and Distance to primary health care centre (0.9%).

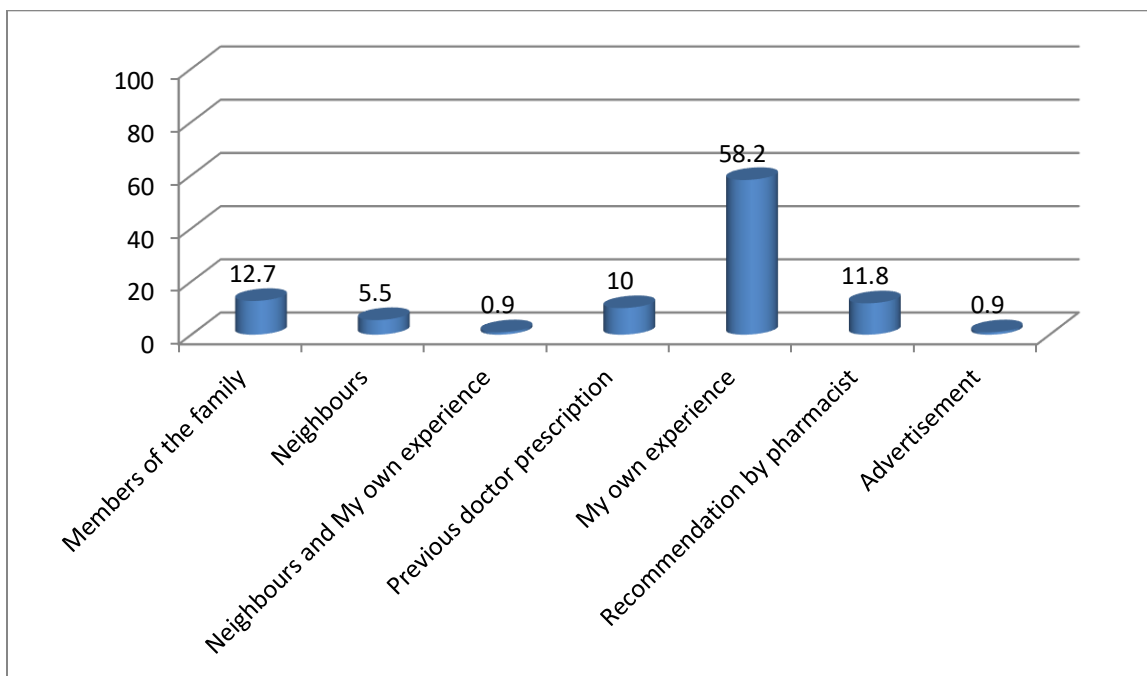


Fig 1 Percentage of Source of information for self-medication

Regarding the source of information for self-medication more than half of the participants 56.3% reported their own experience. Other sources reported were Members of the family (12.7%), Neighbours(5.5%), Neighbours and My own experience (0.9%), Previous doctor prescription(10%), pharmacist(11.8%) and advertisement (0.9%).

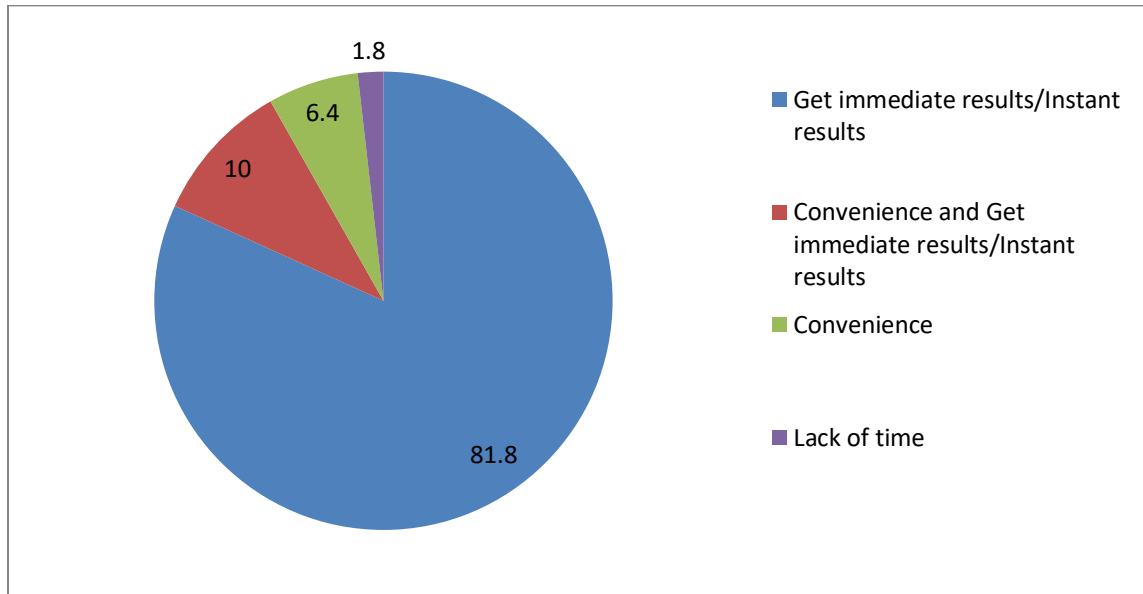


Fig 2 Percentage of reasons for self-medication

Regarding the reason for self-medication majority of 81.8% reported in order to get immediate results or instant results,10% reported as convenience and to get immediate results,6.4% reported as their convenience and lack of time and 1.8% reported as lack of time.

n = 110

SI No	Self-medication practice	Frequency	Percent
1	Type of illness managed by self-medication		
	Minor illness	109	99.1
	Major illness	1	0.9
2	Consulting Doctor for second time same illness		
	Yes	108	98.2
	No	2	1.8
	Reason for not consulting doctor for second time for same illness		
	Depends upon situation (n=2)	2	100

Table 2.2 Self-medication practice of rural population

Regarding the self-medication practice 99.1% of the participants reported that they take self medication for managing minor illness.98.2% of the participants reported that they consult the doctor for the second time and 1.8% reported that they won't consult the doctor for the second time and it also depends on the situation (100%).

n = 110

SI No	Self-medication practice	Frequency	Percent
1	Reasons for stopping self-medication		
	After recovery	107	97.3
	A few days after the recovery	2	1.8
	After consulting a pharmacist	1	0.9
2	Pharmacists encourages self-medication		
	No	110	100
	Yes	-	-
3	Pharmacists refuse to supply self-medication		
	No	109	99.1
	Yes	1	0.9
4	Action taken if Pharmacists refuse to give self-medication		
	Compel him to give	1	0.9
	Show old prescription	109	99.1

Table 2.3 Self-medication practice of rural population

An overwhelming 97.3% of the participants reported that they stop the self medication after recovery and 1.8% reported as they stop the drug after few days of recovery.100% of the participants reported that pharmacists are not encouraging self medication and they refuse to supply medications(99.1%). Also all the participants (99.1%) tend to compel the pharmacist for providing self medication.

n =110

Sl No	Self-medication practice	Frequency	Percent
1	Delay to visit hospital		
	Yes	25	22.7
	No	85	77.3
	Reason for delay (n=25)		
	Distance	2	8
	Distance and Financial Problem	2	8
	Lack of time	1	4
	Lack of time and Ignorance	1	4
	Financial Problem	4	16
	Lethargy	1	4
	Lethargy and Ignorance	1	4
	Ignorance	8	32
	any other (lack of transport, fear and non- availability of CHC)	5	20
	2	Avoiding hospital visits	
Yes		14	12.7
No		96	87.3

Table 2.4 Self-medication practice of rural population

Almost three fourth (77.3%) of the participants reported that they do not delay to visit the hospital and 22.7% agreed that they delay to visit the hospital. Also participants reported that the reason for delay to visit to the hospital is distance (8%),distance and financial problem (8%) financial problem(16%), lack of time(4%), lack of time and ignorance (4%), lethargy and ignorance(4%),lethargy (4%) and ignorance (32%). 87.3% of the total participants in the current study reported that they avoid hospital visits and 12.7% reported that they do not visit the hospital visits.

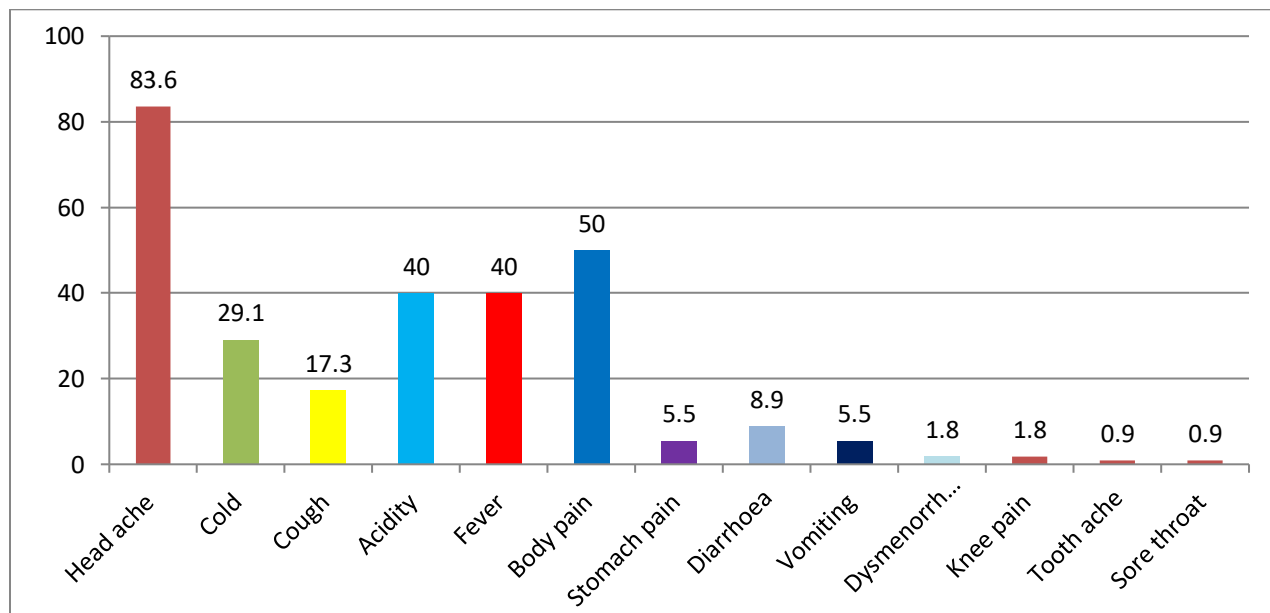


Fig : 3 Common ailments for self-medication

The common ailments necessitating self-medication in the current study were head ache(83%.6), cold(29.1%), cough(17.3%), acidity(40%), fever(40%), body pain(50%),

stomach pain(5.5%), diarrhoea(8.9%), Vomiting(5.5%), Dysmenorrhoea(1.8%), knee pain(1.8%), tooth ache(0.9%) and sore throat(0.9%).

N=110

Sl No	Self-medication practice	Frequency	Percent
1	Adverse Drug Reaction (ADR) during self-medication		
	Yes	2	1.8
	No	108	98.2
	Action taken for ADR (n=2)		
	Stopped taking drug/s	2	100
2	Duration of self-medication (in years)		
	1-4	37	33.6
	5-8	41	37.3
	>8	32	29.1

Table 2.5 Self-medication practice of rural population

98.2 % of the participants of the current study reported that they never experienced any Adverse Drug Reaction (ADR) during self-medication and 1.8% had Adverse Drug reaction and followed by that they stopped the drug. 37.3% of the participants reported that they have been taking the self medication for 5-8 yrs, 33.6 % reported 1-4 yrs and 29.1% reported more than 8 yrs.

IV. DISCUSSION

Self-medication is an age old practice. Self-medication is common in many developing countries. The practice of self-medication is widespread in all developing countries. Urge of self care, feeling of sympathy towards family members in sickness, lack of health services, poverty, ignorance, misbelieves, extensive advertisement and availability of drugs in other than drug shops are responsible for growing trend of self-medication(6). Previous studies have shown that the prevalence of self-medication as 37% in urban population and 17% in rural population in India, whereas 12.7-95% in other developing countries.(4).This indicates the severity of the issue which need to be studied. The present study tried to rule out the self medication practices among the rural population, Bangalore, Karnataka, India.

In the current study, majority of the participants were between 31-45yrs (44.5%). Similar finding was reported by Phalke V.D., Phalke D.B and Durgawale P.M. 2006.(6). Dissimilar report was given by Sandeep A et al 2013.(7) An overwhelming percentage of 83.6 % were females. Contradictory results were reported that self medication was practiced by males.(6)(7) were Similar finding was reported by Jain S et al 2018(5). Majority of the participants studied up to secondary education (56.4%). Similar findings were reported by previous researchers (3), (5).dissimilar report was given by Sandeep A 2013.(7) 30.9% of them did not have formal education .Majority of (61.8%) of the participants were home makers.

Majority of the family has 4-6 members in the family (66.4%). An overwhelming percentage of 65.5% lives in a

nuclear family. This is because of the disintegration of the joint families even in the rural population; Contradictory finding was reported by Jain S et al 2018(5).83.6% percent of the participants were married 95.5% of the participants had no family physician and only 4.5% of them had family physician.

The participants reported the reasons for practicing self mediations were for minor illness it is not required to consult physician(52.7%) followed by distance to the primary health centre(20%) and other reasons such as prior experience of self-medication in the family, emergency, non-availability of the doctors, economic condition, distance to PHC and emergency and consultation fee of the physician. Research studies have also reported similar results, that the most common reasons for self-medication are Time saving, High cost of consultation, minor illness (Doctor's advice not needed)(4)(5), convenience.(4) Other studies reported the most common reasons as financial restraints (8),unwillingness to meet the doctor(3) and lack of time to go to the medical practitioner(8)(9). This could be because the health care services are getting costlier day by day in India. Other reasons might be lack of time, cost saving, convenience, quick relief, ignorance etc.

The present study identified that Participants own experience (58.2%) was the major source of information for the self medication followed by members of the family, recommendation by pharmacist, previous doctor prescription. Contradictory finding was given by Jain S et al 2018 where the major source of information was the pharmacist.(5)(7)(9) Contradictory findings were given by a previous study that major reason for self medication was friends and family members.(3) Similar result was reported by Keshari SS, Kesarwani P and Mishra M 2014 (4) where previous doctor prescription was the major source of information and other reasons included pharmacist(4)(5),family (5)(10), friends & neighbours(4)(10)and advertisement(4). These are consistent with the earlier reports.

The most common reason for self medication was to get immediate results or instant results (81.8%) followed by convenience and to get immediate results, convenience and lack of time and lack of time.Similar studies have also reported the reason for self medications were mild illness(5)(4), cost saving(1)(8), convenience(1),(4),time saving(4) , lack of time(1)(5)(8), prior experience with illness(1), quick relief ,unavailability of doctors (1), high cost of consultation (4),self decision(5).easy availability(5) ,self decision (5),economic constrain(6),non availability of health care facility(6),advertisement(6) etc.

Ninety eight percent of the participants consult the doctor for the second time. 100% of the participants reported that pharmacists are not encouraging self medication and they refuse to supply medications (99.1%). Participants (99.1%) tend to compel the pharmacist for providing self medication. (77.3%) of the participants reported that they do not delay to

visit the hospital. Common reasons reported were distance, financial problem, lack of time, lack of time and ignorance, lethargy and ignorance, lethargy and ignorance. 87.3% of the total participants in the current study reported that they avoid hospital visits.

The common ailments necessitating self-medication in the current study were head ache, cold, cough, acidity, fever, body pain, stomach pain, Loose motion, Vomiting, Dysmenorrhoea, knee pain, tooth ache and sore throat. Since the rural population does agricultural work which involves strenuous physical activity. Also majority of the participants were females who combined does it with the house hold chores. This might result results in body ache, pain and headache.

Similar results were reported by other studies where the study results revealed that people take self medication for minor illness like head ache(4)(5)(6) (11),fever (1)(4)(5)(7)(11)(9)(10)(12), pain (4)(5)(7)(6)(12),abdominal problems and diarrhoea(1),(4) Other studies reported few other common alignments which includes injury (1), respiratory problems(1)(4), urogenital manifestations (1)(11), general problems(1), skin lesions(1) , other head and neck manifestations(1), pain (5)(11),cough and cold (5)(6)(11)(9),dental problems (13), dyspnoea (14), leg pain(14) ,and eye manifestations.(1).

Ninety eight percent were never experienced any Adverse Drug Reaction (ADR) during self-medication. Although the participants did not experience the adverse reaction, there is always a risk for developing adverse drug reactions, drug-drug interactions, skin problems, hypersensitivity reactions, allergy and even death. This could be prevented or minimized by increased awareness and education in society. Information, education and communication is required to make public aware about the ill effects of self-medication.

Thirty seven percent of the participants reported that they have been taking the self medication for 5-8 yrs, 33.6 % reported 1-4 yrs and 29.1% reported more than 8 yrs. Similar report was given by Phalke V.D. , Phalke D.B and Durgawale P.M. 2006.(6).This could be because of easy availability of over the counter (OTC) drugs in India.

V. CONCLUSION

There is a varying spread of the self medication practices among the rural areas of India. Easy availability of over the counter (OTC) drugs is a vital factor responsible for the self medication and dependency. So, strict legislation is required to prevent drug distribution without doctor's prescription. Mass media activities by newspapers, radio, T.V, posters, messages at public places which encourages the self medication should be checked. Community awareness programme, educational interventions should be conducted about the risk of developing

adverse effects of self-medication. Also people in rural areas need to be encouraged to avail health services from Government which is free of cost.

REFERENCES

1. Mohd Tabish Khan, Anees Ahmad, Najam Khalique, Mohammad Athar Ansari, Mohd Maroof . Self-medication practices in rural Aligarh , Uttar Pradesh , India. *Int J Community Med Public Heal.* 2016;3(10):2874–7.
2. WHO guidelines for regulatory assessment of medicinal products for use of self medication.pdf. Geneva, Switzerland: World health Organisation; 2000. p. 3–28.
3. Apurba Marak, Madhur Borah, Himashree Bhattacharyya KT. A cross-sectional study on self-medication practices among the rural population of Meghalaya. *Int J Med Sci Public Heal.* 2016;5(6):1134–8.
4. ShyamSunder Keshari, Prinyanka Kesarwani MM. Prevalence and Pattern of Self-medication Practices in Rural Area of Barabanki. *Indian J Clin Pract [Internet].* 2014;25(7):636–9.
5. Shubham Jain, Aditya Thakur, Kunal Peepre, Shivika Kaushal PK. Prevalence of self-medication practices among the residents of urban slums located near govt . medical college , Jabalpur. *Int J community Med public Heal.* 2018;5(2):811–7.
6. V.D. Phalke , D.B. Phalke PMD. Self-Medication Practices in Rural Maharashtra. *Indian J Community Med.* 2006;31(1):1–2.
7. Sandeep A, Mamatha G T, Shaik Shafia Begum, Bhimaray Krishna Goudar, Mahadevamma L KRV. Self-Medication: Knowledge and Practice among Urban and Rural Population. *Int J Pharm Biol Arch.* 2013;4(3):488–92.
8. Jyothi Kaushal, Mahesh C gupta, Pooja Jindal SV. Self-Medication Patterns and Drug Use Behavior in Housewives Belonging to the Middle Income Group in a City in Northern India. *37(1):16–9.*
9. Merlin Thaipparambil Silvan, Rajeswari Ramaswamy, Teena Nazeem, Joice Samuel, Sachin Mathew Mathews SKC and MM. Study on self-medication practice among consumers in parts of East Bengaluru. *Int J Pharmacol Res.* 2016;6(6):210–3.
10. Dnyanesh Limaye, Vaidehi Limaye, Gerhard Fortwengel GK. Self-medication practices in urban and rural areas of western India: a cross sectional study. *Int J Community Med Public Heal.* 5(7):2672–85.
11. Ahmad A, Patel I, Gp M, Balkrishnan R. Evaluation of Self Medication Practices in Rural Area of Town Sahaswan at Northern India. *Ann Med Health Sci Res.* 4(2):73–8.
12. Chandani Ashok Kumar NR. Assessment of self-medication patterns in a rural area of south India: a questionnaire based study. *Int J Community Med Public Heal [Internet].* 2018;5(1):354–60. Available from: <http://www.ijcmph.com>

13. Gandhi S, Gandhi R, Nayyar A. Assessment of abuse of self-medication for oral and dental problems among 21–60 years aged populace residing in the rural areas of Belgaum Taluk, Karnataka, India: A questionnaire study. Arch Med Heal Sci [Internet]. 2016;4(2):180. Available from:
<http://www.amhsjournal.org/text.asp?2016/4/2/180/196207>
14. Sangeetha Nair MG, Rajmohanan TP, Kumaran J. Self medication practices of reproductive age group women in Thiruvananthapuram District, South India: A questionnaire - Based study. J Pharm Sci Res. 2013;5(11):220–5.