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Practices of Self-Medication among Tribal Population North Maharashtra (Khandesh)

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Abstract: ***Urge of self-care feeling of sympathy towards family members in sickness, lack of health services, poverty, ignorance, misbelieve, extensive advertisement and availability of drugs in other than drug shops are responsible for growing trend of Self-Medication. Aims & Objectives: 1.Prevalence of Self-Medication among tribal people.2.To find out reasons of Self-Medication Most preferred system (pathy) of Medicine as Self-Medication, Common Medications used for treatment of minor or major illness.3.To find out whether benefits weigh higher than adverse effects of Self-Medication. Methodology: A cross sectional descriptive study was carried out in a cluster of villages randomly selected 318 households' tribal people. Result: The prevalence of Self – Medication in the sample was 100% with traditional system and 92.14% (293 / 318) with other pathy. Among the households practicing self – Medication the main reason was economic (100 %) and relief from previous use of same drugs (89.07%).For Traditional practice Ancestors were major source of information (100%) and for other pathy private General - Practitioners was the main source of information. Traditional methods (100%) are used as 1st contact care or 1st line of treatment for any disease and among the people practicing self – Medication, Allopathy (100%) was the only other pathy to be practiced. The symptoms for which medicines was taken were mostly for fever (93.85%), weakness (89.07%), pain (87.03%) etc. The drugs were generally kept in bags (61.77%) and hanged to the roof which is not of much height and at times in pots (32.08%). Self – medication was practiced for all members of family – Infants, children, Adults, Old. Maximum number of people practicing self –Medication spent 6 – 10 % (43.68%) of their income on medicines. During the study the commonly observed drugs are antipyretic (91.80%), antimicrobials (74.06%).Adverse drug reactions which were commonly encountered are gastritis (38.22%), sedation (25.93%). Conclusion: Practice of Self – Medication was found common among Tribal in North Maharashtra. Well planned, intensive educational programmes may be executed by utilizing professionals from the hospitals which will be beneficial and safe and may help to reduce load on health personnel for minor sickness at least.***

Keywords: self-medications, practices, tribal population

1. Introduction

Self-medication defined as "Medication that is taken on patient's own initiative or on advice of a pharmacist or lay person" [3]. Self-medication has been classically defined as "The use of medications, herbs and home remedies on its own initiative or on the advice of another lay person, without consulting the doctor." Self-Medication is an age old concept. Urge of self-care feeling of sympathy towards family members in sickness, lack of health services, poverty, ignorance, misbelieve, extensive advertisement and availability of drugs in other than drug shops are responsible for growing trend of Self-Medication.

William Osler has said that "A desire to take medicine is perhaps the great feature which distinguishes man from animals." As drugs used by these patients are without proper knowledge about dose, sensitivity or interactions with other drugs, this could lead to hazardous effects to their health. Ever increasing population and associated paucity of health services in developing countries like India, is likely to be associated with increasing practice of Self-Medication. Although such practices could be hazardous to health, some benefits could also be attained if the consumers are well informed, trained and educated. Present study was carried out to investigate the magnitude of problem and factors responsible for this practice in Tribal area of Jalgaon district in Northern Maharashtra.

2. Review of Literature

In developing countries like India easy availability of wide range of drugs coupled with inadequate health services result in increased proportion of drugs used as self-medication compared to prescribed drugs [11]. The prevalence of Self – Medication in studies [2][3][5][9] carried out in urban and rural population was 35%, 81%.51%, 42%, 77 % respectively. The present study is carried out to find the prevalence of self-medication in tribal population.

Economic role in self-medication in this study is found out as in other studies it revealed 60.53% [2], 58.54% [3], 86% [8].

Source of information about medication as revealed, that it is mainly from private practitioners [9][10].The most practiced system of medication was allopathic as shown 78.95%[2], 73.17%[3], 69% [7], 97% [9] in studies. Storage place of drugs was safe 89% [9].

The symptoms for which medicines were most commonly taken were fever, pain, epigastric discomfort, cough,

headache, diarrhea, etc. [2][3][4][8][9][12]. The role of socio economic status on medication was found. Majority of respondents utilized less than 5%of their monthly income (2, 5, 9, and 12).The drugs that are most commonly used were analgesic, antipyretics, antimicrobials, antitussives in studies (2, 9, and 10). Adverse effects reported due to self-mediation were epigastric discomfort and gastritis (5, 9). Expiry date was noted by most of the subjects (3).

Self-medication is one of the leading causes for the ever increasing drug resistance for various antimicrobials (5). Doctors prescribing for earlier symptoms of similar nature were found to be the most common source of information (12). The main medication sources were pharmacies and medication left over from previous prescriptions (10). Advertisement in newspaper, TV, radio & magazine were main source of information 32.93% followed by chemist shop 25.61% (9).

3. Aims & Objectives

1. Prevalence of Self-Medication among tribal people.
2. To find out reasons of Self-Medication whether it is due to economic inability in utilizing established medical facilities, literacy, socioeconomic status, advertisement.
3. To find out whether benefits weigh higher than adverse effects of Self-Medication though Self-Medication promoted by WHO.

4. Methodology

This study was carried out in a cluster of villages about 80km to north-eastern side of Dr.Ulhas Patil Medical College – 1) Sahastraling. 2) Garkhede. 3) Bhangipada. 4) Nimdya. in Raver taluka, randomly selected, having tribal people of Jalgaon district, a part of `*Khandesh'* region in Northern Maharashtra as a study area.

Following preliminary liaison visits were arranged along with local Medical Social Worker in order to establish a rapport and to inform the local leaders and angan sevikas the purpose of study. The data was collected by interviewing heads of all families by house to house survey visiting personally by the author with clear explanation of purpose of study with possible adverse consequences of `self-medication`.

- **Place of Study:** A cluster of villages 1) Sahastraling 2) Garkhede 3) Bhangipada 4) Nimdya in Raver taluka of Jalgaon district as a study area
- **Study Period:** One month (May 2010).
- **Study Population:** All people (1847) residing in the villages in 318 households.
- **Study Subjects:** The heads of all families (318) of the study area.
- **Study Equipment:** Pre tested and modified in vernacular language i.e. in Marathi to suit the study group.
- **Data Collection and Study Method:** Face to face personnel interview was conducted by the investigator in a selected area.
- **Data Analysis:** The collected data by interviews was compiled and analyzed using rates, ratios and suitable statistical test.
- **Consent:** After explaining purpose of study A consent in the form of oral vernacular language i.e. Marathi from the study subject was taken.

5. Results

The prevalence of Self – Medication in the sample was 100% with traditional system and 92.14% (293 / 318) with other pathy. As only head of families were interviewed most of them were males 88.99% (283 / 318) in case of absence, female heads were interviewed 11% (35 / 318). Among them the literacy rate was less than 5%.

Table 1: The study population

Sr No.	*Age group*	*Male*	*Female*	*Total*
1.	Infants (up to 1 yr)	10	9	19
2.	Children (1 – 15 yrs)	385	379	764
3.	Adults (15 – 40 yrs)	364	375	739
4.	Adults (40 – 60 yrs)	135	113	248
5.	Old age (60 +)	42	35	77
	Total	936	911	1847

Table 2: Reasons For Self - Medication (n = 293)

S. No.	*Reasons For Self - Medication*	*Users*	*Percentage (%)*
1.	Economic	293	100
2.	Doctor's advice not needed	0	0
3.	Relief from previous use of similar drug	261	89.07
4.	No other facility	6	2.04
5.	Educated	0	0
6.	No specific Reason	11	3.75
7.	Ignorance	15	5.11

Among the households practicing Self – Medication the main reason was economic (100 %) and relief from previous use of same drugs (89.07%).

Table 3: Source of information about medication (n = 293)

Sr. No.	*Source of information about medication*	*Users*	*Percentage (%)*
1.	RHTC	94	32.08
2.	Chemist	24	8.19
3.	Educational course	0	0
4.	Advertisement	0	0
5.	Private practitioners	255	87.03
6.	Ancestors	293	100

For Traditional practice Ancestors were major source of information (100%) and for other pathy private General - Practitioners was the main source of information.

Table 4: Category of Medication

Sr. No.	*Category of Medication*	*Users*	*Percentage (%)*
1.	Allopathic	293	100
2.	Ayurvedic	0	0
3.	Homeopathy	0	0
4.	Traditional System	318	100

Traditional methods (100%) are used as 1st contact care or 1st line of treatment for any disease and among the people

practicing self – Medication, Allopathy (100%) was the only other pathy to be practiced

Table 5: Condition for which Medication practiced (n = 293)

S. No.	*Condition for which Medication practiced*	*Users*	*Percentage (%)*
1.	Weakness	261	89.07
2.	Pain	255	87.03
3.	Cough	115	39.24
4.	Fever	275	93.85
5.	Diarrhea	100	34.12
6.	Wound	79	26.96
7.	Epigastric Discomfort	123	41.97
8.	Sore Throat	65	22.18
9.	Headache	91	31.05
10.	Respiratory complaints	50	17.06
11.	Others	38	12.96

The symptoms for which medicines was taken were mostly for fever (93.85%), weakness (89.07%), pain (87.03%) etc.

Table 6: Storing place (n = 293)

S. No.	Storing place	Users	Percentage (%)
1.	Cupboard locked	0	0
2.	Cupboard unlocked	0	0
3.	Bag	181	61.77
4.	Pot	94	32.08
5.	Kept on Table	18	6.14

The drugs were generally kept in bags (61.77%) and hanged to the roof which is not of much height and at times in pots (32.08%). They were kept out of reach of children, complications from accidental consumption was not reported.

Table 7: Proportion of expenditure to total Income (n=293)

Sr. No.	*Proportion of expenditure to total Income (%).*	*Users*	*Percentage (%)*
1.	1 – 5	109	37.20
2.	6 – 10	128	43.68
3.	11 – 15	49	16.72
4.	16 – 20	5	1.70
5.	21 – 25	2	0.68

Self – medication was practiced for all members of family – Infants, children, Adults, Old. Maximum number of people practicing Self –Medication spent 6 – 10 % (43.68%) of their income on medicines.

Table 7: Observed drugs (n = 293)

Sr. No.	*Observed drugs*	*Users*	*Percentage (%)*
1.	Analgesic	251	85.66
2.	Antipyretic	269	91.80
3.	Antacid	129	44.02
4.	Antihistaminic	146	49.82
5.	Antimicrobial	217	74.06
6.	Antimotility	94	32.08
7.	Antitussive	61	20.81
8.	Antispasmodic	6	2.04
9.	Sedative	0	0

During the study the commonly observed drugs are antipyretic (91.80%), antimicrobials (74.06%).

Table 8: Adverse drug reaction (n = 293)

Sr. No.	*Adverse drug reaction*	*Users*	*Percentage (%)*
1.	Gastritis	112	38.22
2.	Sedation	76	25.93
3.	Rash & Swelling	32	10.92
4.	Increase in Symptom	6	2.04

Adverse drug reactions which were commonly encountered are gastritis (38.22%), sedation (25.93%).Complication as such is not encountered.

6. Discussion

A very high trend towards Self – Medication was seen among tribal population in present study. Previous studies by V. D. Phalke (3), Aruna C (12), V. V. Patil (5), Larissa G. (11) Nikita D (9) have shown prevalence of Self – Medication in Rural and Urban population range from 14 – 82%.

Patil V. V. (5) in rural community in India documented the prevalence of Self – Medication in 42% surveyed population and P. M. Durgawale (2) among slum dwellers reported a prevalence of Self – Medication of 35%, V. D. Phalke (3) revealed a prevalence of 81.51% and Nikita D (9) among hospital staff revealed a prevalence of 77% in contrast to our study which shows a prevalence of 100% using Traditional system and 92.14% using other pathy (mainly Allopathy). The high prevalence of Self – Medication in our study was may be due to poor accessibility to health services & very low literacy rate.

In studies by P.M. Durgawale (2) in urban slums and Saeed et al(8) and V. D. Phalke (3) Self – Medication practice was due to economic reasons 60.53%, 86%, 58.54%, respectively which is in contrast to this study which shows 100% which is extreme.

The other main reason for Self – Medication was relief from the symptoms with the use of same medicines before 89.07% that was in relation to Nikita D. (9) which showed 65% that was unlike to other studies by P. M. Durgawale (2), V. D. Phalke (3), Aruna C (12), V. V. Patil (5) and was probably due to different location chosen for study and variation in educational and socioeconomic status. Faith in Traditional system is one of the main reasons.

The main source of information about medication were Ancestors (100%) in relation to traditional system and besides it private practitioners were the main source of information regarding drugs that was consistent with other studies by Nikita D. (9), R. Sharma (10).

All the respondents practiced Traditional system (100%) as first contact care and Allopathic drugs (92.14%) susequently. The finding of users using allopathic drugs besides traditional method was consistent with finding by P. M. Durgawale 78.95% (2), V. D. Phalke 73.17% (3), Mohankumar T. 69% (7) & Nikita D 97% (9).

The common ailments for which Self – Medication was practiced were fever, pain, weakness, epigastric discomfort,

cough, headache, etc. which is similar to finding by P. M. Durgawale (2).

Majority of respondents unknowingly stored drugs in safe place like bags 61.77% which were hanged high and in pots 32.08%. Also unknowingly they kept the drugs in dark places which is attributed to their housing style, whereas in study by Nikita D. (9) 89% respondents stored drug in safe place.

Majority of respondents 43.68% utilized 5 – 10 % of their monthly income for medication. This could be attributed to the poor economic status of users which is against the finding of less than 5% in other studies by P. M. Durgawale 47.36% (2), Aruna C (12), V. V. Patil (5), Nikita D. 74% (9).

Self – Medication was equally prevalent with all age groups in our study and same was reported by P. M. Durgawale (2). The drug most commonly used was found to be antipyretics 91.80%, Analgesic 85.66%, etc. while in other studies by P. M. Durgawale (2), R. Sharma (10), Nikita D (9), the most commonly used drug was analgesic followed by antipyretics, antimicrobials, antitussives etc.

The consumption of antimicrobials 74.06% is very high which is much more than findings by V. V. Patil (5), Kasilo L J (13), Stein C M (4), Nikita D (9). This has raised the chances of spread of resistant organisms. The most common adverse effect seen on Self – Medication was found to be epigastric discomfort and gastritis in relation to other study V. V. Patil (5), Nikita D (9). This is probably due to consumption of increased use of analgesics, antipyretics, antimicrobials. Almost all the subjects did not note the expiry date before consumption of drugs which is found similar to study carried by V. D. Phalke (3). None had knowledge about correct use and side effects of medication.

7. Conclusion

Practice of Self – Medication was found common among Tribal in North Maharashtra (Khandesh). These tribals believed in traditional methods as the first contact care and allopathic drugs subsequently. Traditional ancestral knowledge is their wealth. But with the advanced diseases, resistant bacteria, viruses this practice seems to lack behind. But in few cases this system is very useful.

Irrational use of antipyretics, antimicrobials, analgesics, etc. was found, that may prove dangerous considering their adverse drug reactions like renal damage, gastric ulceration and its perforation and the resistance to drugs. Abuse of antimicrobials was seen which may lead to increased emergence of drug resistant organisms, also when taken without need or / and because of persons peculiar constitution may cause serious side effects like rashes, allergic reactions, indigestion, even damage to kidneys, heart and bone marrow.

Well planned, intensive educational programmes may be executed by utilizing professionals from the hospitals which will be beneficial and safe and may help to reduce load on health personnel for minor sickness at least. Government look out for their health and try to provide them with knowledge of at least common diseases and their treatment and provide them with medical facilities as none of the villages s had doctor! Studies must be carried out in this area adopted for finding their nutritional level as it seems to be question.

8. Summary

- The prevalence of Self – Medication in the sample was 100% with traditional system and 92.14% (293 / 318) with other pathy. Among them the literacy rate was less than 5%.
- Among the households practicing Self – Medication the main reason was economic (100 %) and relief from previous use of same drugs (89.07%).
- For Traditional practice Ancestors were major source of information (100%) and for other pathy private General - Practitioners was the main source of information.
- Traditional methods (100%) are used as 1st contact care or 1st line of treatment for any disease and among the people practicing Self – Medication, Allopathy (100%) was the only other pathy to be practiced.
- The symptoms for which medicines was taken were mostly for fever (93.85%), weakness (89.07%), pain (87.03%) etc.
- The drugs were generally kept in bags (61.77%) and hanged to the roof which is not of much height and at times in pots (32.08%). They were kept out of reach of children, complications from accidental consumption was not reported.
- Self – medication was practiced for all members of family – Infants, children, Adults, Old.
- Maximum number of people practicing Self –Medication spent 6 – 10 % (43.68%) of their income on medicines.
- During the study the commonly observed drugs are antipyretic (91.80%), antimicrobials (74.06%).
- Adverse drug reactions which were commonly encountered are gastritis (38.22%), sedation (25.93%).
- Complication as such is not encountered.

9. Future Scope

- During the study, among the drugs taken **"ANTIHELMINTHICS"** were not found. This might be one of the major factors for **Anemia** in the population Here the study must be carried for finding the prevalence of Anemia before and after the treatment with antihelminthics.
- The Anti – Microbial were used abruptly this really has contributed in the pattern of emerging resistance of organisms to various drugs.
- There should be legislation for the use of antimicrobials.
- There should be Nutritional educational camps to be held at remote places so that people could themselves access their nutritional level and try for the best.
- Self Medication is a good solution to minor illness but people should be guided carefully through camps, advertisements, etc.
- Knowledge about dosages, the possibility of adverse reactions and the seriousness of potential poisoning with

OTC drugs was inadequate and needs to be corrected for more efficient self medication.

- Attempts to reduce inappropriate self medication should target prescribers, pharmacists and the general public.

References

[1] Tomson J and Stirkey G. Self prescribing by way of pharmacies in three Asian countries.Lancet 1986; 13:620-2.
[2] P.M.Durgawale - Indian Journal of Public Health vol.xxxxii, No.2, April- June 1998.
[3] V.D.Phalke, D.B.Phalke and P.M.Durgawale – Indian Journal of Community Medicine.vol.31,No.1,Jan – March 2006.
[4] Stein C.M. Self Medication in Urban and Rural Zimbabwean communities. British J of Clinic Pharmacol 1989; 27,741 -7.
[5] Patil V.V. Community study of self Medication. Unpublished data 1996.
[6] Prasad B.G. Social Classification, Changes proposed in the social classification of Indian Families. J Ind Med Assoc 1970; 55,198-9.
[7] Mohamkumar T.Studies in drug utilization. Maharashtra Herald, 8th Jan 1982.
[8] Saeed A.A Self Medication among primary care patients in Faradack Clinic in Riyadh. Soc Science Med 1988;27 3 , 287 – 9.
[9] Nikita Dedhia. Self Medication among hospital staff excluding medical professionals.RJKIK.vol.I,No.3 Jul-Sept.2009.
[10] R. Sharma, C.L. Sharma, B. Kapoor, U Verma, Self – Medication among urban population of Jammu city. Ij Pharmaco; feb.2005; vol.37, Issue: 40-4.
[11] Larissa Grigoryan; Flora M. Haaijer – Ruskamp; Johannes G. M Burgerhof; Redi Meehtler, et al. Self Medication with antimicrobials in Europe Medscape; Mar.2006.
[12] Aruna Chandaraju. Do not doctor yourself, THE HINDU online edition of India's National Newspaper; Jan 14, 2007.
[13] Kasilo L J et al. Epidemiology of household medication in urban Gweru & Harare. Cent. Afr J Med 1991; 37:167-71.

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