Self-Medication among Rural Population: A Present Day Challenge!!!

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***Abstract*- Background:** Self-medication is a global phenomenon and potential contributor to human pathogen resistance to antibiotics and adding to the woes of public health. The World Health Organization (WHO) Expert Committee on National Drug policies in 1995 stated that Self-medications is widely practiced in both developed and developing countries. This study was undertaken to assess the self-medication practices and to relate factors influencing it.

Methodology: A community based cross sectional study was conducted among rural adult population. A pre-designed and pre-tested questionnaire was developed, data were collected and distributions of responses were presented as frequencies and percentages. Chi-square was applied.

Results: A total of 187 adults took part in the study, majority of 64.71% were aged 26-33years, 58.28% were females, 49.73% literates, 45.45% lower middle class joint families were predominant and maximum belonged to class V socioeconomic status as per Modified B G Prasad Classification. The prevalence of self-medication was between 50-70% for the common problems of joint pains, headache and fever followed by diarrhoea. The significant factors were male gender, younger age group and absence of health facility near to the residence ($p<0.005$)

Conclusion: Self-medication has become an alarming concept which needs to be addressed through holistic approach of adequate awareness and education and improvising on the authorized dispensing of drugs. There is a necessity for behaviour changes related to self-medication practices and adhere to strict regulatory and managerial strategies to make health care easily accessible and more cost-effective.

***Index Terms*-** Adult, Global, Health, Rural, Self-medication.

I. Introduction

Self-medication is a global phenomenon and potential contributor to human pathogen resistance to antibiotics and adding to the woes of public health. [1]The World Health Organization (WHO) Expert Committee on National Drug policies in 1995 stated that Self-medications is widely practiced in both developed and developing countries. [2]

The prevalence of irresponsible self-medication is high all over the world, and it is a very common practice in women those who live alone both in the economically deprived communities as much as it is in the economically privileged. [3, 4] Globally, consumers commonly reach for self-care products to help them treat their common health problems which include fever, body pains, indigestion, diarrhoea, vomiting, cough, and upper respiratory tract infections. [5]

Self-medication is very common among individuals in many developing countries, and despite the growing research interest on the topic, not much is known about its major determinants.[6] Evidence indicates that rural residents have a limited access to healthcare, and that rural areas are underserved by primary care physicians.[7].

Inappropriate self-medication is more likely to occur among people in rural areas with poor terrain, limited health facilities, high illiteracy level and poverty, extent of inappropriate as well as appropriate self-medication in a rural community need to be assessed. This study was aimed at assessing self-medication among residents of rural field practice area of a tertiary medical college Hyderabad, Telangana.

II. Objective

To assess the self-medication practices and relate factors influencing it.

III. Materials and Methods

Study design & setting:

A community based, cross-sectional study was conducted from Aug-Oct 2020 for three months among adults residing in rural area from 1yr, which is the field practice area of Rural Health Training Centre attached to a tertiary care hospital in Hyderabad, Telangana, India.

Inclusion and exclusion criteria:

Adults residing in the study area for more than one year and gave consent on a voluntary basis to participate in the study were included. People who are on medication for chronic diseases (Hypertension, diabetes, chronic heart dieses etc.) were excluded and also people who could not be contacted after three visits were excluded from taking part in the study

Sampling size:

Convenient sample size of 200 adults in the age group 18 to 60 years were considered. Out of these participants 13participants couldn't be traced even after three visits to their houses so they were excluded. Final sample size was estimated to be 187.

Data collection:

Data were collected by interviewing all 187 study participants by conducting house-to-house survey using a pre-designed and pre-tested semi structured proforma, which include part 1 socio-demographic profile like age, gender, occupation, and socioeconomic status, part 2 questions on self-medication was also collected.

The questionnaire used in the study was translated to vernacular language and validated by the investigators. Data was collected after obtaining informed consent on voluntary basis and assuring the confidentiality face to face interview was conducted. Data analysis was done using SPSS software version 22.0. Descriptive statistics and frequencies were calculated. Study was conducted after taking Institutional Ethical Committee approval.

IV. Results:

A total of 187 Adults population residing in the rural area participated in the study. The socio-demographic characteristics of the study participants are shown in the table .1, where majority of 64.71% were in the age group of 26-33years. A maximum of 58.28% were females, 50.27% were illiterates and 45.45% of the participants belong to lower class (class IV) according to BG Prasad's classification.

Table .2 depicts the details of self-medication practices. 64% of the participants said they practised self-medication because of the location of health care services more than 2 kms from their house, where as 71% participants said they are practising self-medication for normal fever, body pains (66%), don't want to visit doctor(61%), cost effective(68%), previous prescription(52%),earlier experience(57%),very mild illness(76%) and non availability of medical staff(26%) respectively. Over all 50-70% of the participants practise self-medication and the remaining doesn't have the idea of practising self-medication.

Fig: 1 shows the distribution of study participants based on the type of drugs used in practising self-medication. Highest being the analgesics 55.61%, followed by antipyretics 50.26%, antacids 43.85%, Multivitamins 42.78% and the lowest being the sleeping pills 12.83%, this is because of asking for the prescription by the local pharmacy.

Table3: showing association between the related factors and practise of self medication. Significant association was found between male genders (p-value 0.001867), age group ≤ 25 years (p-value 0.00032), nearby health facility absent (p-value 0.00088) and practising of Self-medication

V. Discussion:

Present study shows the distribution of study participants(64.71%) are in the age group between 26-33years which is similar to Marak et al 64.8% [8] and Aqeel et.al [9] higher when compared with the study done by Ayanwale, et al. [10] (52.5%).

Our study found prevalence of practice of self-medication is between 50-70% among the rural population. High percentage of self-medication among the population might be due to the factors such as difficult road communication in the area, weak public health infrastructure, and peoples' trust in local chemists. Similar community-based, cross-sectional study in rural areas by Ahmed et al. had found that 50% of respondents practiced self-medication. [11]

While Keshari et al. and Banjara and Bhukya had found very high percentages of (69% and 80%, respectively) self-medication practices among the rural population. [12, 13]

In our study, practice of self-medication was found to be more among the females 58.28% than the males. Which is higher than the studies done by Ayanwale, et al [10] Marak *et al*. [8] 48.4% & 47.2% respectively.

Present study shows 71% participants said they are practising self-medication for normal fever, body pains (66%), don't want to visit doctor(61%), cost effective(68%), previous prescription (52%), earlier experience (57%), very mild illness(76%) and non availability of medical staff(26%) respectively. Over all 50-70% of the participants practise self-medication. It is higher than Hong Kong China (32.5%) [14], while lower than Slovenia (92.3%) [15] And the remaining doesn't have the idea of practising self-medication. Marak *et al*. [8] study shows fever (17.5%) body pain (13.7%) , Don't want to see doctor (27%) , monetary constraints(5%) , Previous prescription (21.5%) , earlier experience (15.5%), mild illness(30%) respectively.

Aqeel et.al [9] study shows 41.8% reported "mild illness" as the most common reason, followed by "economical" 21.2%, "previous experience" 19.6%, "lack of health care facilities" as 12.4% respectively.

In our study it is observed that 55.61% used analgesics, followed by antipyretics 50.26%, antacids 43.85%, Multivitamins 42.78% as practise of self medication, and the lowest being the sleeping pills 12.83% this is because of asking for the prescription by the local pharmacy.

Aqeel et.al [9] study shows 61.1% Analgesics were determined as the most likely group of medicines used for self-medication followed by multivitamins 7.2%, drugs used in GIT disorders 5.2%, and sleeping pills 0.7% findings are much lower than our study.

VI. CONCLUSION

There is a necessity for behavior changes related to self-medication practices and adhere to strict regulatory and managerial strategies to make health care easily accessible and more cost-effective.

Frequent awareness programmes and IEC should be done on regular basis in the community about the importance consulting doctor before any drug use. Cost effective health care services should be practised and are made easily available to the community, so that receiving healthcare becomes easily accessible and less time consuming.

Strength and Limitations

The study being carried out in a rural population as sample might be helpful to bring out the findings although it had certain limitations such as small sample size, consideration of limited

variables, and exclusion of traditional and AYUSH medication practices.

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Table 1: Socio demographic profile of study participants (n=187)

Age (years)	**Number (n)**	**Percentage (%)**
≤25	38	20.73
26-33	121	64.71
≥ 34	28	14.56
Gender		
Males	78	41.72
Females	109	58.28
Education		
Illiterates	94	50.27
Literates	93	49.73
Socioeconomic status (BGprasads classification)		

Upper class (class I)	5	2.70
Upper middle (class II)	9	4.81
Lower middle (class III)	36	19.25
Upper lower (class IV)	52	27.80
Lower class (class V)	85	45.45

Table 2: Factors responsible for self-medication practise among study participants (n=187)

Factors	**Numbers**	**Percentage (%)**
Health care services		
Far (> 2 kms)	119	64
Near (<2 kms)	68	36
Normal fever	132	71
Body pains	124	66
Don't want to visit doctor	114	61
Cost-effective	128	68
Previous prescription	98	52
Earlier experience	106	57
Non availability of medical staff	48	26
Very mild illness	142	76

Note: Number & Percentages of self-medication practise only are represented in the table.

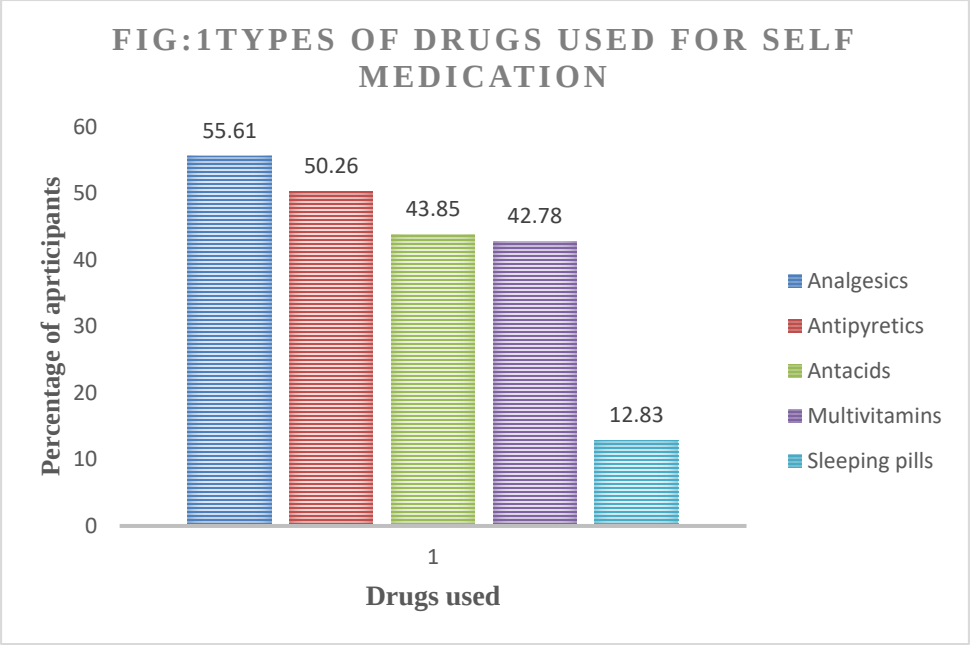

Table3: Association between related factors and self-medication practices.

Parameter	**χ2**	**df**	***p value**
Male gender	12.5669	1	0.001867
Young age (≤ 25yr)	21.2238	2	0.00032
Nearby Health facility Absent	15.3799	1	0.00088

***significant**