Prevalence of self medication practice and it's associated factors among rural population residing in RHTC area, Konaseema District, Andhra Pradesh.

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INTRODUCTION:

Self-medication, also known as intermittent or continuous prescription drug usage for chronic or recurrent sickness or symptoms, refers to the use of medications to address self-diagnosed disorders or symptoms.[1] Self-medication is the use of drugs without first consulting a doctor about indication, dosage, and treatment length. The fact that self-medication is the first option makes it a widespread practise worldwide. [2] William Osler has said that a desired to take medicine is perhaps the greater feature which distinguisher man from animals their desire however may play havoc when a person starts taking medicines on his own, forgetting that all drugs are toxic and thus justifiable use in therapy is based on a calculable risk.[3]

Self medication increases the possibility of drug abuse.[4]It also makes signs and symptoms of the underlying problems creating drug resistance, and delaying diagnosis.[5]

Pharmacists and pharmacy assistants are crucial in encouraging the public to self-medicate.[6] Even though OTC (Over the Counter) medications are intended for self-medication and have been shown to be effective and safe, improper use due to ignorance of the proper dosage, side effects, and interactions could have serious consequences, especially in the case of extreme ages (children and the elderly) and unique physiological conditions like pregnancy and lactation.[7,8] The concept of self medication has gained universal acceptance as it encourages as individual to treat minor illness with effective and simple remedies.

It is even promoted so as to have self belief in preventive, curative & rehabilitative care self medication can do potentially good as well as bad to people.

Self-medication rates are high in emerging nations like Pakistan, India, Bangladesh, and Nepal. More than 50% of people use medications without a doctor's prescription. The governments of all emerging nations have issued rules to prohibit self-medication in order to address this issue. The sale and prescription of each and every substance that has been registered with the relevant drug authorities must be strictly regulated. The WHO recommendations for drug prescription and dispensing should be followed by the health department and drug regulatory authorities. [9]

Based on these grounds the present study was carried out to find the prevalence of self medication in the rural area of Amalapuram.

METHODS:
RESULTS:

Study Area: The study was conducted in Kamanagaruvu,a rural field practice area of KIMS Medical College & Hospital, Amalapuram, Konaseema District, Andhra Pradesh.
Study Design: A Community based cross sectional study
Study Period: This study was conducted from 16TH May 2022 to 21st May 2022.
Study Participants: Males and females above 18 years residing permanently in the field practice area were included in this study.
Inclusion Criteria: All participants 18 years and above and willing to participate in this study were selected.
Exclusion Criteria: People not willing to participate in the study were excluded Psychiatric patients, Pregnant women. Severely ill patients were excluded.
Consent: Verbal consent was taken

Data Collection:
Sample size was calculated using a predesigned and pre tested proforma. People were interviewed in a local language during home visit. Information was collected regarding age, education, occupation, religion, income and also self medication use.

The knowledge regarding self medication and also the reasons for use were meticulously enquired at the end of interview, any misconceptions an quires regarding were clarified.

Sample Size: Sample size was calculated based on the formula z^2PQ/l^2, considering the prevalence of self-medication 50%[10], confidence interval 95% and non-response rate of 10%. The calculated minimum sample size was 96 and the current study was done among 686 participants.

Sampling method: Convenient sampling method was used to select the study population. A sample size of total 686 participants were taken purposively into the study.

Data Analysis:
All the statistical analysis was done by using statistical software SPSS version 20.0 and MS excel 2019. A descriptive data was presented as percentages and also tabulated. Chi-square test was used to test association between different factors and self medication practices.For all statistical analysis,$p<0.05$ was cosidered as statistically significant

Fig – 1: Basic demographic variables

Characteristics			Number	%
Gender	Female		347	50.58 %
	Male		339	49.42 %
Age	15 – 25		138	20.11 %
	26 – 35		184	26.82 %
	36 – 45		145	21.1 %
	46 – 50		89	12.97 %
	51 – 60		43	6.26 %
	> 60		87	12.6 %
Education	Illiterate		145	21.37 %
	Primary		120	17.4 %
	Secondary		48	6.99 %
	High School		273	39.79 %
	Degree		100	14.5 %
Occupation	Professional		5	0.72 %
	Semi-Professional		38	5.53 %
	Clerical / Shop / Former		74	10.7 %
	Skilled		100	14.5 %
	Semi Skilled		37	5.39 %
	Unskilled		82	11.95 %
	Unemployed		304	44.31

Age Distribution:

The present study involves 686 study population. In this study the majority of the participants were females 50.58% (n=347) while 49.42% were males (n=339).

This study population belongs to the age group of 15 years to 70 years. Maximum study population (n=184) 26.85% belonged to the age group of 26 – 35 years while those above 60 years were the least (n=87) 12.6%.

According to the present study prevalence of self-medication was found to be 40.5%. Self-medication practice is significantly high in males, age above 50 Yearsand clerical occupation (62.16 %) group.

In this study it is seen that the frequency reduces the professionals. It is maximum in the unemployed (n=304) 44.31%, while it is least in the professionals (n=5) 0.72%.

Prevalence is more in males (50.58%) subjects in the age group of 26 – 35 years (26.85%) having high school education (39.79%) and those who were unemployed (44.31%).

Fig – 2: Socio-demographic characters

Socio-demographic characters	Self Medication				χ^2 value	ρ - value
	YES		NO			
	N	%	N	%		
SEX						
Female	112	32.28 %	235	67.72 %	19.82	0.000
Male	166	48.97 %	173	51.03 %		
AGE						
15 – 25 (n = 138)	38	27.54 %	100	72.46 %	15.20	0.009
26 – 35 (n = 184)	74	40.22 %	110	59.78 %		
36 – 45 (n = 145)	64	44.14 %	81	55.86 %		
46 – 50 (n = 89)	38	42.7 %	51	77.3 %		
51 – 60 (n = 43)	23	53.49 %	20	46.51 %		
> 60 (n = 87)	41	47.13 %	46	52.87 %		
EDUCATION						
Illiterate (n = 145)	48	33.1 %	97	66.9 %	8.08	0.089
Primary (n = 120)	38	31.67 %	82	60.33 %		
Secondary (n = 48)	18	37.5 %	30	62.5 %		
High School (n = 273)	120	43.96 %	153	56.04 %		
Degree (n = 100)	42	42 %	58	58 %		
OCCUPATION						
Professionals (n = 15)	5	33.33 %	10	66.67 %	58.44	0.000
Semi professional (n = 74)	38	51.35 %	36	48.65 %		
Clerical (n = 74)	46	62.16 %	28	37.84 %		
Skilled (n = 100)	59	59 %	41	41 %		
Semi skilled (n = 37)	20	54.09 %	18	45.95 %		
Unskilled (n = 82)	23	28.05 %	59	71.95 %		
Unemployed (n = 304)	87	28.62 %	217	71.38 %		

Fig – 3: Source of Procurement

Source		Number	%

Chemist shop by symptoms	51	18.35 %
Old Prescription	18	6.47 %
Other Shops	5	1.8 %
Stored drugs at home	13	4.68 %
Others	8	2.88 %
Multiple	183	65.83 %

The most common source of Procurement was found to be by multiple methods (65.83%) followed by chemists by telling the symptoms (18.35%), old prescription (6.47%), followed by drugs stores at home (4.68%).

Fig – 4: Indication for using self-medication

Indication	Number	%
Fever	218	78.42 %
Diabetes	23	8.27 %
Head ache	13	4.68 %
Others	10	3.6 %
Joint Pain	8	2.88 %
Constipation	3	1.08 %
Diarrhoea	3	1.08 %

The drugs which are most widely used are for fever (78.42%) followed by diabetes (8.27%), headache (4.68%), and other indications (3.6%). Joint pain, constipation and diarrhoea are lesser indications.

Fig – 5: Type of Medication used

Type	Number	%
Allopathic	242	87.05 %
Ayurvedic	5	1.8 %
Multiple	31	11.15 %

Maximum drugs those which are used for self medication belong to allopathic group (87.05%), followed by multiple (11.15%) and ayurvedic (1.8%).

Fig – 6: Drugs used for self medication

Drug	Number	%
Analgesics	166	59.71 %
Antibiotics	13	4.68 %
Multivitamins	10	3.6 %
OHD's	36	12.95 %
Multiple	48	17.27 %
Antacids	5	1.8 %

The commonly used drugs for self medication are analgesics (59.71%), followed by multiple (17.27%), OHD's (12.95%), antibiotics (4.68%), multivitamins (3.6%) and least antacids (1.8%).

DISCUSSION:
The current study shows that maximum participants were females (n = 347) and remaining males (n = 339). This is similar to a study done by A. AbdueAzeezThoufiq et.al. where there were more females (n = 280) as compared to males (n = 144).[2] It is also similar to a study done by Annadurai et. al., where there were 90 males and 245 females.[11]

According to the present study prevalence of self-medication was found to be 40.5% and self-medication practice is significantly high in males, age above 50 Years and clerical occupation (62.16 %) group. A study done by KalaivaniAnnadurai et al, [11] in rural Tamilnadu also observed high prevalence of self-medication(53.43%). Another study by Selvaraj et al,[12]in urban Puducherry revealed 11.9% which is less when compared to the current study.The current study shows a positive

association between occupation and self-medication ($\rho = 0.000$) similar to a study done by Selvaraj ($\rho = 0.003$).[12]

In the current study self-medication is widely used for fever (78.42%) and the drugs commonly used are analgesics (59.71%). KalaivaniAnnadurai et al,[11] study has shown similar findings. Fever (55.86%), was the common symptom for which they procured drugs without doctor's consultation and paracetomol (84.91%), is the frequently used drug for self –medication. The most common source of Procurement was found to be by multiple methods (65.83%) followed by chemists by telling the symptoms (18.35%) in the present study. Where as telling the symptoms to pharmacist (38.1%) was the commonest method adopted to procure drugs by the usersin KalaivaniAnnadurai et al, [11] study.

CONCLUSION:
Due to lack of information self medication can cause hazardous effects such as antibiotic resistance, skin problems, hypersensitivity and even allergies.

There is a need to ensure safety and efficacy of OTC drugs. Easy availability of OTC drugs is a major factor responsible for irrational use of drugs in self medication. Specific Pharmacovigilance is necessary to keep a tab an Pharmacists as well as patients. Doctors must be encouraged to report any adverse events. Dispensing modules need to be improved managerial strategies are needed for easy, accessible health care strategies.

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