

To study the effectiveness of pharmacist involvement on self-medication in community setting

G.Sirisha¹m.Pharm,(Phd),Dr.G.Nagaraju²m.Pharm,Phd,

B. Poojitha³,Ch.Ganesh⁴,G.Sravani⁵,G.Anjali⁶,S.Nagasri⁷,A.Yashashwini⁸

1,2.Associate Professor Dhanvanthari Institute Of Pharmaceutical Sciences, Sujathanagar, Kothagudem

,3,4,5,6,7,8. 4TH Year 2nd Semester B.Pharmacy students Dhanvanthari Institute Of Pharmaceutical Sciences, Sujathanagar, Kothagudem, Telangana, India,507120

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ABSTRACT: The prevalence of self-medication with the over-the-counter drug in Sujatha Nagar is high. Self-medication has been a modern trend for more than 10 years. Self-medication is higher in respondents with secondary school qualification, most of the respondent was depended on self-medication due to lack of time, most of the respondent were male with middle age category. The study found that the main indication for self-medication was pain. The most commonly used self-medication was found to be analgesic and antipyretic, the knowledge of respondents about drug was found to be less and it was also reported that most of them did not spot counselling by the Pharmacist on phase 1. Due to counselling and leaflets, test sample have improvement to enquire about the drugs to Pharmacist. control.it was also noted that in phase 1.the control group had side effect and test group was free from side effect of self-medication in phase 2, where they had side effect in phase 1.so,our survey shows that self-medication is harm to human body.

I. 1.INTRODUCTION:

Medicaments that are safe and effective for use by the general public without the aid of a prescription from a registered medical practitioner are called as "over the counter (OTC) drugs". They are also known as Nonprescription medicines.^[1] There are three categories of medicine in terms of their availability to the public; (a) prescription only (POM), which can only be obtained on a medical or dental prescription; (b) pharmacy only (P), which do not require such a prescription, but can only be purchased in a pharmacy under the supervision of a registered pharmacist; and (c) medicines on the General Sales List, which are available, usually in restricted quantities, through other non-pharmacy retail outlets. Any drug or preparation, which is not included within the first and third of these

categories falls into the pharmacy only list. Medicines available in the second and third categories are often referred to as over-the-counter or OTC medicines.^[2] The term "OTC drug" is a loose and legally undefined term. The United States Department of Food and Drug Administration (FDA) defines OTC drugs as "drugs that are safe and effective for use by the general public without seeking treatment by a health professional". Because there are over 3,00,000 marketed OTC drug products, FDA reviews the active ingredients and the labelling of over 80 therapeutic classes of drugs. For each category, an OTC drug monograph is developed and published in the Federal Register. These monographs define the safety, effectiveness and labelling of all marketing OTC active ingredient.^[3] The therapeutic categories of OTC drugs are further grouped in 12 broad therapeutic classes:

- Analgesics and antipyretics
- Cold, cough, and allergy products
- Night-time sleep-aids
- Gastrointestinal products
- Dermatological products
- Other topical products (including dermal and vaginal antifungals, anorectal medications, head lice products, hair loss products, and otics)
- Ophthalmic products
- Oral health care products
- Menstrual products
- Nicotine replacement products
- Weight loss aids
- Vaginal contraceptives and emergency contraceptives.^[4]

1.1 Indian Scenario

In India, the term OTC has no legal recognition and does not find a mention in the Drugs and Cosmetics Act (DCA) 1940, or the Drugs and Cosmetics Rules (DCR) 1945. The drug manufacture, import and sales are governed by the DCA and DCR and are implemented by the Central Drug Standards Control Organisation (CDSCO) which is headed by Drug Control General of India (DCGI) who in turn functions under Directorate General of Health Services. The drugs are categorized into schedules as per the rules published in the official gazette vide notification No.

F. 28-10/45-(H) 1 dated 21/12/1945. Prescription only drugs are those drugs that are listed in Schedules H and X of the Drugs and Cosmetics Rules. Drugs listed in Schedule G do not need a prescription for purchase but DCA emphasises a mandatory warning label "Caution: It is dangerous to take this prescription except under medical supervision". The drugs listed in the Schedule K which are usually treated as household products can be sold by a non-pharmacist in remote villages whose population is less than 1000. The drugs that are not listed in the "prescription only" list are considered as "OTC".^[5,6,7] The OTC committee of the Organisation of Pharmaceutical Procedures of India (OPPI) works for the promotion of responsible self medication to promote the OTC market. It not only promotes OTC use but also emphasises on safety. The committee also aims at promoting the importance of responsible self medication through community education and awareness programs.^[8]

OTC medicines are produced, distributed and sold primarily with the intention that they will be used by consumers on their own initiative and responsibility, when they consider such a use appropriate. The packing, package size, labelling and product information (package insert, leaflet, directions folder or other accompanying text) will generally be designed and written to ensure appropriate self medication. It should be realized that the distinction between self-medication products and prescription medicines is not a sharp one; differences in dosage and/or indications can lead to differences in classification. For example, ibuprofen is sold only on prescription at high dose for treatment of arthritis and over the counter at low doses for treatment of headaches and other minor pain. It is sometimes the practice that smaller packages are available as self medication. A

medicinal product for self-medication should fulfil at least the following three criteria:

Active ingredient: The active ingredient at the intended dose should have low inherent toxicity (e.g. no reproductive toxicity or genotoxic or carcinogenic properties relevant to human use, unless such hazard can be appropriately addressed by labelling).

Intended use: The intended use should be appropriate for self-medication. Use of the product should not unduly delay diagnosis and treatment of a condition requiring medical attention.

Product properties: The product should not have properties that make it undesirable. For example, it should not have an unfavourable adverse event profile; require a physician's supervision for monitoring during drug therapy; represent a significant risk of dependence or abuse; or display other limiting characteristics such as interaction with commonly used medicines or foods that may result in serious adverse reactions.^[9]

Self medication must also be seen in the context of health literacy. Functional health literacy is the ability to read, understand, and act on health information. The consequences of inadequate health literacy include poorer health status, lack of knowledge about medical care and medical conditions, decreased comprehension of medical information, lack of understanding and use of preventive services, poorer self-reported health, poorer compliance rates, increased hospitalizations, and increased health care costs.^[10] In order to use a non-prescription product safely and effectively, the consumer must perform a number of functions normally carried out by a physician treating a patient with a prescription drug. These functions include accurate recognition of the symptoms, setting of therapeutic

1.2 Benefits and Risks of OTC drug use

Benefits of OTC use from Different Perspectives The Pharmaceutical Industry

It is generally recognised that activity on all aspects of self medication is expanding within the pharmaceutical industry. The advantages to the industry are that access to their products is increased, a switch to non prescription status may protect against generic competition, and an existing brand that is also available on prescription may be promoted.^[14]

1.3 Healthcare Professionals

Self-medication also has advantages for healthcare systems as it facilitates better use of clinical skills of pharmacists and may contribute to reducing prescribed drug costs associated with publicly funded health programmes.^[15] The strategic policies of many pharmacy professional bodies is also driving increased deregulation and promoting self-medication. The area of self-medication, particularly within some European countries, is the unique domain of pharmacy. Research has shown that pharmacists are supportive of deregulation as it enables them to fulfil a more clinical role, increases therapeutic options, promotes greater involvement with patients and enhances their professional status. For physicians, enthusiasm is more tempered, perhaps due to concerns of reduced contact with patients, incorrect diagnosis by a patient/pharmacist of a medical condition and inappropriate use of non-prescription drugs.^[11] However, there is greater realisation that unnecessary consultations with patients who have minor symptoms could be avoided through appropriate and effective self-medication.

1.4 The Patient

Over-the-counter medication offers advantages like easy access to medicines, self-management of minor ailments with the involvement of pharmacists, and utilization of available resources. Another advantage is that patients are provided with an opportunity to take responsibility for their own health. Therefore, they should not be unreasonably denied access to the means to make and carry out decisions about their own health. Encouraging patients to treat themselves builds self confidence in their capacity to manage their own illnesses. This is ultimately empowering to patients. Use of over-the-counter medicines could also benefit patients in that they would save the time and other costs involved in visiting a general practitioner and then a pharmacy. It may be cheaper for a patient who is liable to prescription charges to buy the medicine over the counter than to pay a prescription charge.^[11]

II. METHODOLOGY

2.1 Materials and Methods:

A Prospective experimental study was carried out for a period of two months in the selected community pharmacy of bhadradrikothagudem district, Telangana. Initially we have collected the details regarding OTC

dispensing that is occurring in 8 community pharmacy in bhadradrikothagudem district. We have prepared questionnaire & leaflet for the study during that month. Data on the presence of medicines in households and their utilization were collected using a structured questionnaire to ensure quality of the data, the questionnaire was pretested in 10 households in similar setups before the actual data collection. Inclusion and exclusion criteria were considered and the written informed consent was obtained for the study.

Study Setting

The study was carried out in selected community pharmacy of bhadradrikothagudem district of kothagudem.

We categorized the community pharmacy into:

1. Control pharmacy (Group A)
2. Test pharmacy (Group B)

Control pharmacy

Under pharmacy A, we studied the following community pharmacies:

1. OLD DIPO(KOTHAGUEDEM)
2. MAIN HOSPITAL(KOTHAGUEDEM)

Test pharmacy

Under pharmacy B, we studied the following community pharmacies:

1. SUJATHANAGAR
2. GANESH TEMPLE(KOTHAGUEDEM)

STUDY PROCEDURE

The study design was divided into 3 phases/cycle

1. PHASE 1

During our first survey of the study we collected all data related to the self-medication, from which we summarize the current scenario of self-medication. In the initial stage, itself we have categorized the community pharmacy into Pharmacy A and Pharmacy B. Data was collected from both group with respect to the prepared Questionnaire form, provided tele-counselling and leaflets only to Pharmacy B. We collected around 400 questionnaire form from both the control and test group. Duration was about two weeks

2. PHASE 2

Duration of second stage was around 3 months. From the test pharmacy we have randomly selected the patient's, follow up was carried out through telephone.

3.PHASE 3

After 1st and 2nd phase comes the 3rd phase where again we collected the data based on the questionnaire form. This was the crucial stage of our study project where we compared the result of questionnaire form of the 1st phase with that of the result obtained in the 3rd phase . To determine

the effectiveness of our study project we also compared the data of test and control group. The duration of this phase was 3 weeks.

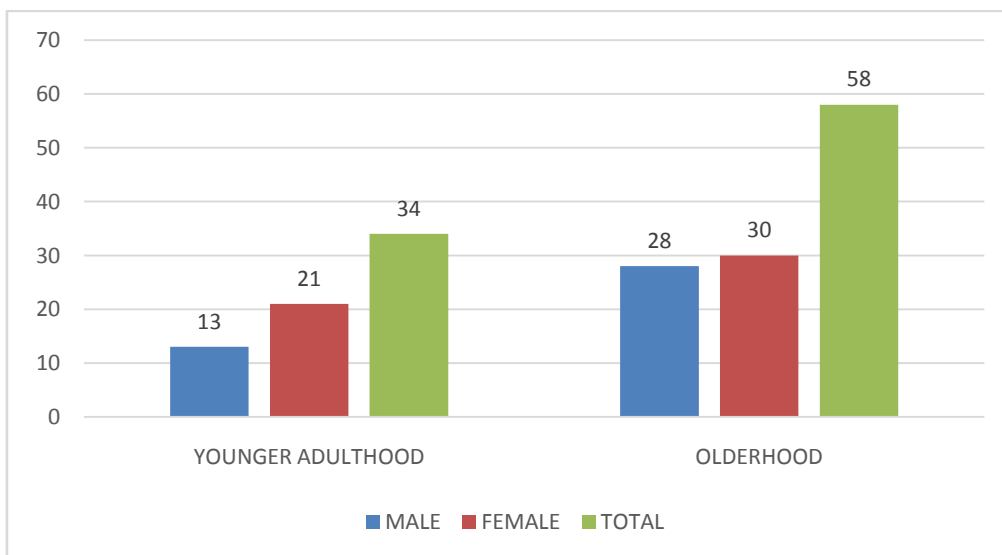
Based on the project result we also gave awareness to pharmacist about the complications that can arise during OTC dispensing.

III. RESULTS:

AGEWISE DSITRIBUTION OF RESPONDENTS

Table:1

		SEX		Total
		MALE	FEMALE	
AGECATEGORY	YOUNGADULTHOOD	13	21	34
	OLDERHOOD	28	30	58
Total		41	51	92



***Fig 1: Age wise distribution of respondents**

156 (78%) of the total respondents were male, out of which 128(82.95%) were young adult and remaining 28 (17.94%) were middle age group.

Out of 44(22%) of female respondents, 37(84.09%) were young adult and remaining 7(15.90%) were middle age group

EDUCATION WISE DISTRIBUTION OF RESPONDENTS

Table:2

EDUCATION		
		Frequency
Education	UNEDUCATED	51
	SSC	19
	INTERMEDIATE	08
	GRADUATION	22
	Total	100

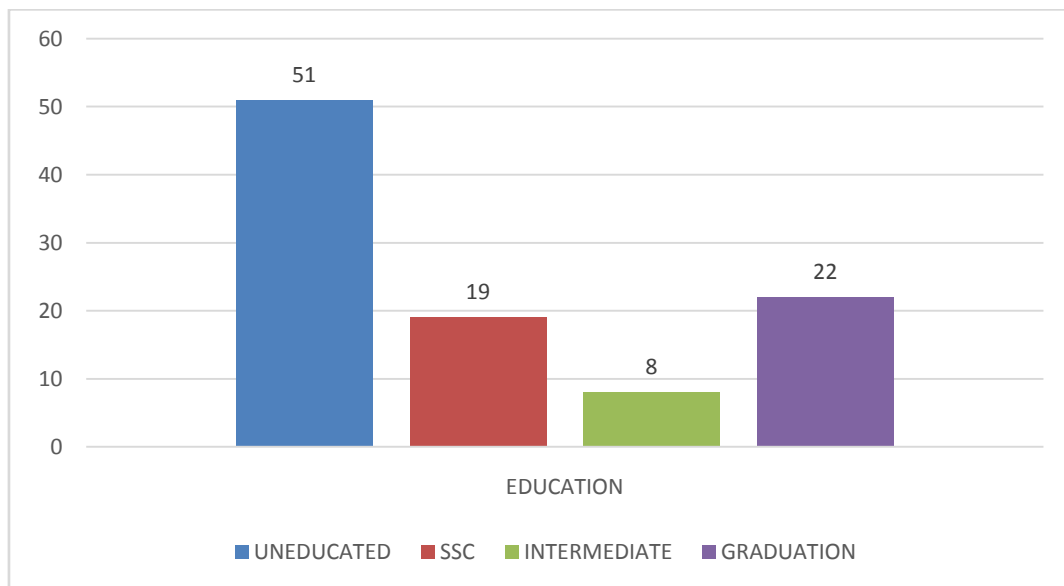


Fig2:education wise distribution of respondents

In 100 total respondents, were SSC ,19(19%) were INTERMEDIATE 8 (8%) , GRADUATION 22 (22%). The education qualification of 49(49%)

respondents were GRADUATION, and remaining 51(51%) were UNEDUCATED.

INDICATION FOR SELF MEDICATION

Table:3

CONDITION				
	Frequency	Percent	ValidPercent	CumulativePercent

Valid	ALLERGY	6	6.0	6.0	5.0
	COLD	8	8.0	8.0	8.0
	CONSTIPATION	3	3.0	3.0	14.0
	COUGH	6	6.0	6.0	20.5
	DANDRUFF	2	2.0	2.0	21.5
	DIARRHEA	3	3.0	3.0	25.0
	EYE IRRITATION	4	4.0	4.0	25.5
	FEVER	20	20.0	20.0	41.0
	GASTRIC PROBLEM	8	8.0	8.0	52.5
	MIGRAINE	1	1.0	1.0	54.5
	MOUTHULCER	3	3.0	3.0	55.0
	PAIN	23	23.0	23.0	86
	THROAT PAIN	3	3.0	3.0	915
	VERTIGO	2	2.0	2.0	92.0
	VOMITING	6	6.0	6.0	95.5
	WOUND	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

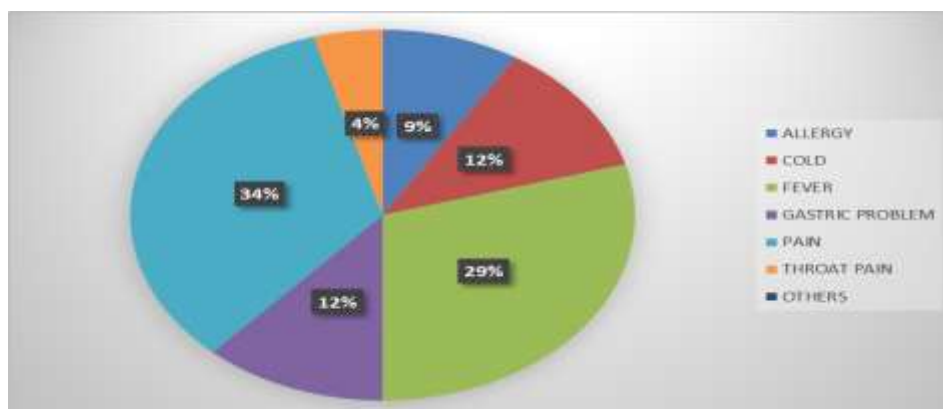


Fig 3: indication for self medication

The study found that the condition prompting self-medication were pain 34% , fever 29% , gastric problem 12% , cold 12%, throat pain

4%,allergy 9%, .Remaining 9%was due to other condition like conjunctivitis, menstrual irregularities, dandruff etc.

DRUGS USED FOR THE SELF TREATMENT

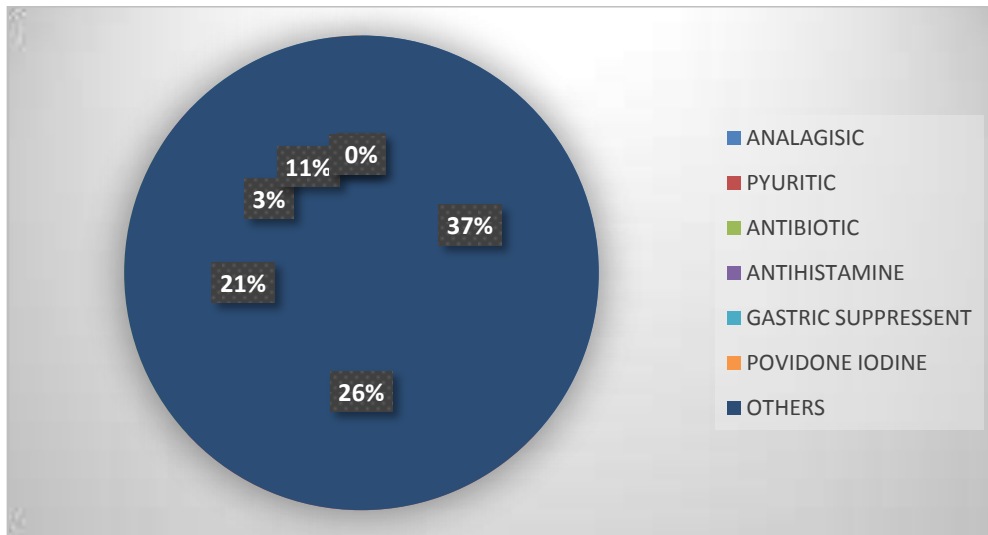


Fig4:drugs used for the self treatment

The drug used for self medication shows, that the most common drug was Analgesics (35%), then Antipyretic (25%), Gastric suppression(10%),

Antibiotics(20%), Antihistamines (3%), Povidone iodine (2%) and remaining for other reason such as conjunctivitis and dermatological products etc.

REASON FOR SELF TREATMENT

Table:4

		Frequency
REASON	LACKOFMONEY	50
	LACKOFTIME	25
	LACKOFTRUST	10
	OTHERS	15
	Total	100

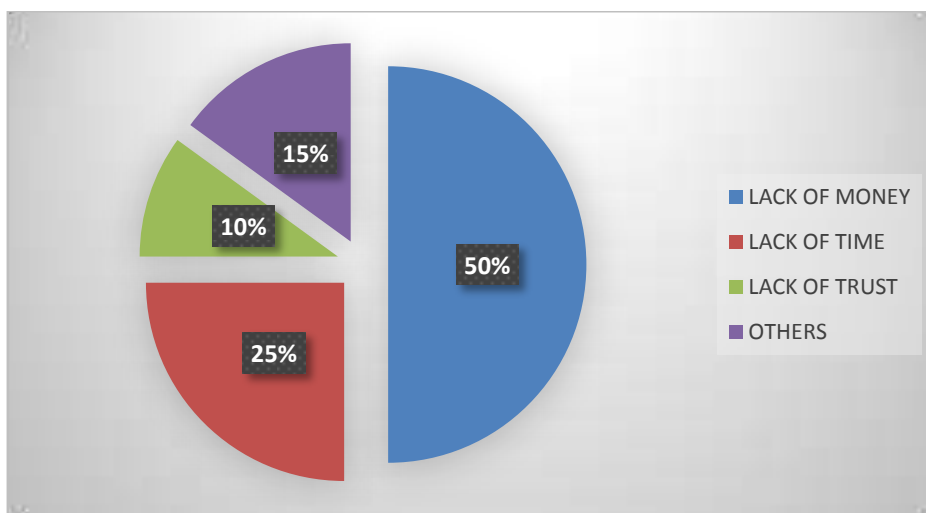


Fig 5: Reason for self medication

100% of the total population took self medicaments due to lack of time, 25% was due to lack of money, 50% was due to lack of trust in

doctor treatment 10%, remaining 15% was due to other reason.

KNOWLEDGE ABOUT THE DRUGS VS SPOT COUNSELLING

Table:5

AWAREABOUT THE DRUGS vs INFORMATION (PHARMACIST)				
Crosstabulation				
		INFORMATION(PHARMACIST)		Total
		YES	NO	
KNOW ABOUT THE DRUGS	YES	13	21	34
	NO	6	60	66
Total		19	81	100

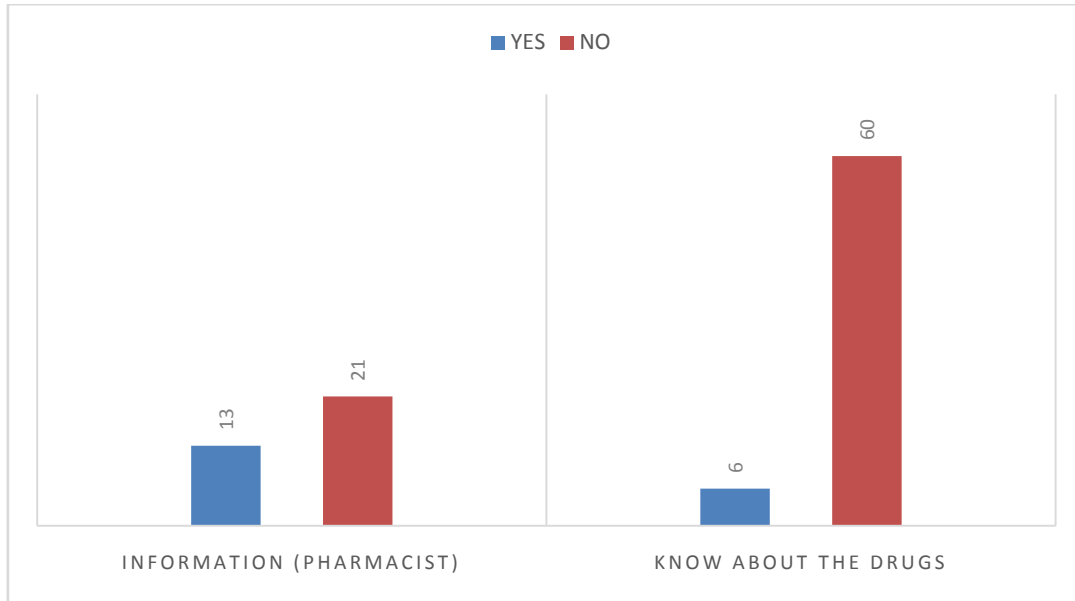


Fig 6: Aware about the drug and spot counselling

From our study 100 subjects, 6% of people known about the drug, out of this 60 % of the people got spot counselling and 21% of people didn't get. 13% of people were unknown about the

drugs, out of these 3% of people got spot counselling, 80% of people didn't get spot counselling.

FREQUENCY OF SELF MEDICATION

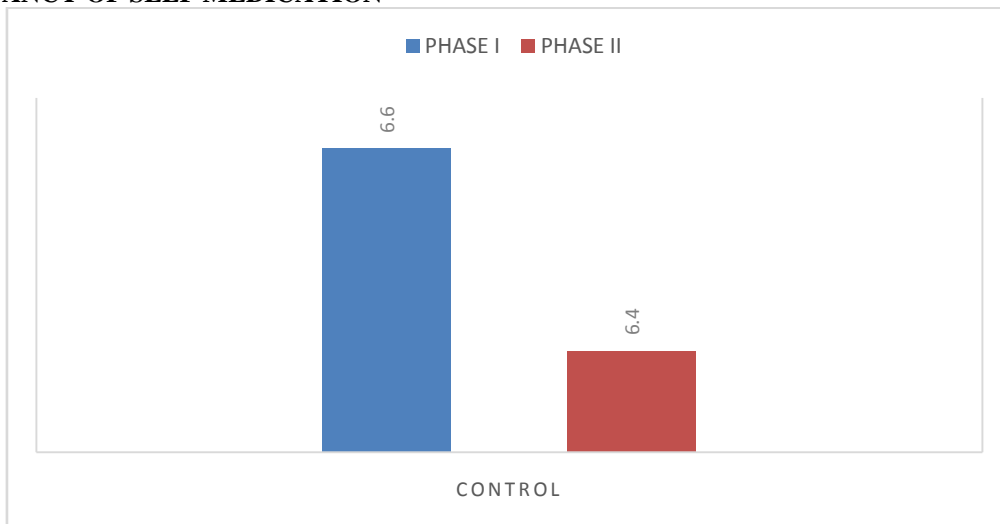


Fig 7: frequency of self medication in control group

40% of control population consume self-medicament 4 times in both phases. In control group 3 times self-medicaments were consumed by 13.33% of respondents in phase 1 and % in phase

2. 2 times self-medicaments were consumed by 6.6% of respondents in phase 1 and 6.4% in phase 2. 1 time self-medicaments were consumed by 60% of respondents in phase 1 and 40% in phase 2.

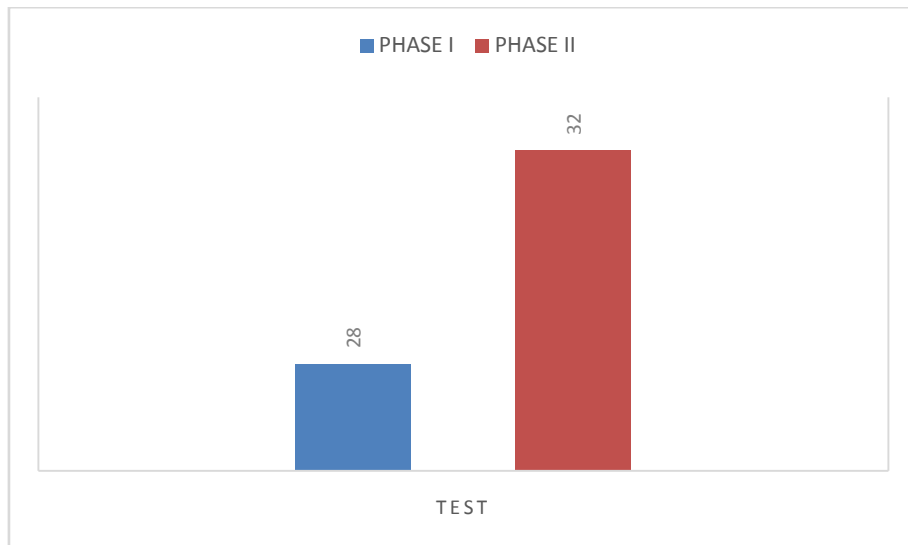


Fig 8: frequency of self-medication in test group

In test group 4 times self-medicaments were consumed by 2% of respondents in phase 1 and 1% in phase 2. 3 times self-medicaments were consumed by 12% of respondents in phase 1 and 5% in phase 2 times self-medicaments were consumed by 36% of respondents in phase 1 and

29% in phase 2. 1 time self-medicaments were consumed by 28% of respondents in phase 1 and 32% in phase 2. 13% Test population did not consume self-medicaments in phase 1 and it will increased to 32% in phase 2.

TREATMENT OUTCOMES

5.8.1PHASE1

Table:6

PHASE1		Frequency
IN ONE MONTH	NODRUGTAKEN	10
	EFFECTIVE	40
	NOTEFFECTIVE	35
	SOME	15
	Total	100

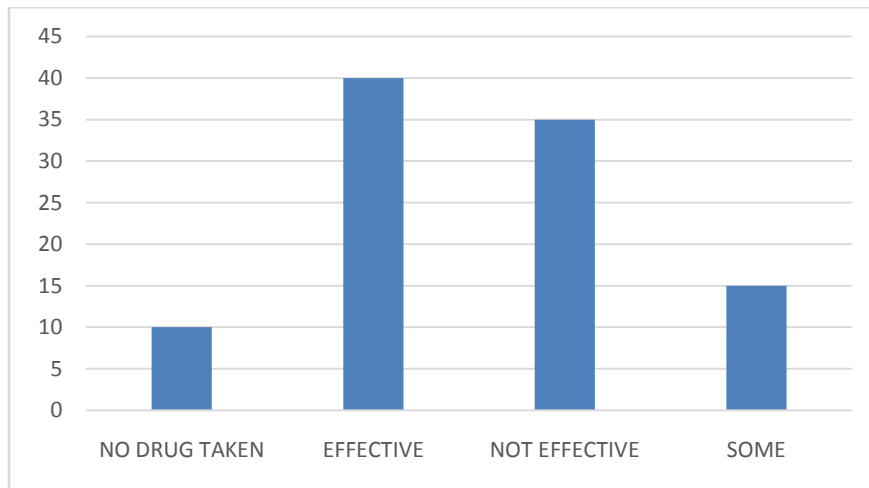


Fig 9: Treatment out comes during one month in phase 1

In phase 1, 56% of the respondents have effective out comes from the self treatment. 9% of respondents have no effect, 34.5% have little effect,

and remaining 5% did not take self medication in one month duration.

5.8.2PHASEII

Table:7

TREATMENT OUTCOME (PHASE1)vs STUDY GROUP Cross tabulation				
PHASE2		STUDYGROUP		Total
		CONTROL	TEST	
TREATMENTOUTCOMES(PHASE2)	NODRUGTAKEN	15	15	30
	EFFECTIVE	10	10	20
	NOTEFFECTIVE	12	10	22
	SOME	13	15	28
Total		50	50	100

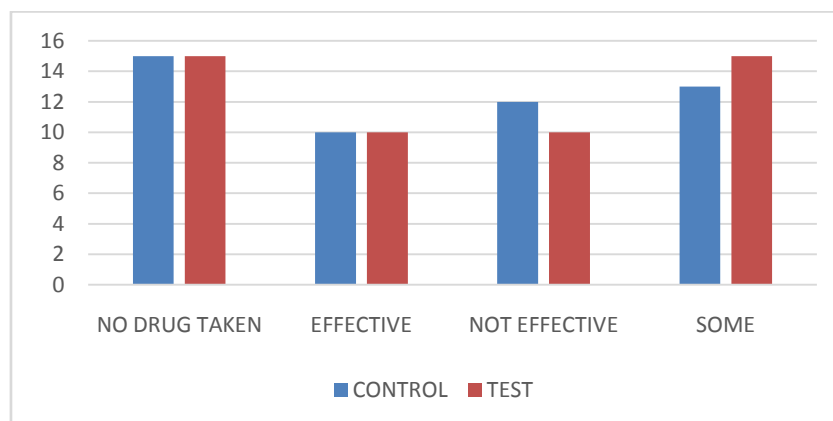


Fig 10: treatment out comes during one month in phase 1

In phase 2 study period, 3% of control and 15% of test reported as they didn't consume self medicaments. 29% of control and 30.5% was reported as effective during self medication. 3.5%

of control 3% of test was reported as not effective.14.5% of control and 1.5% of test was reported as moderately effective.

**SIDE EFFECTS
CONTROL GROUP**

Table:8

		SIDE EFFECTS(POSTEXPOSURE)			Total
		NODRUG	YES	NO	
SIDE EFFECTS	YES	0	25	2	27
	NO	6	0	67	73
Total		6	25	69	100

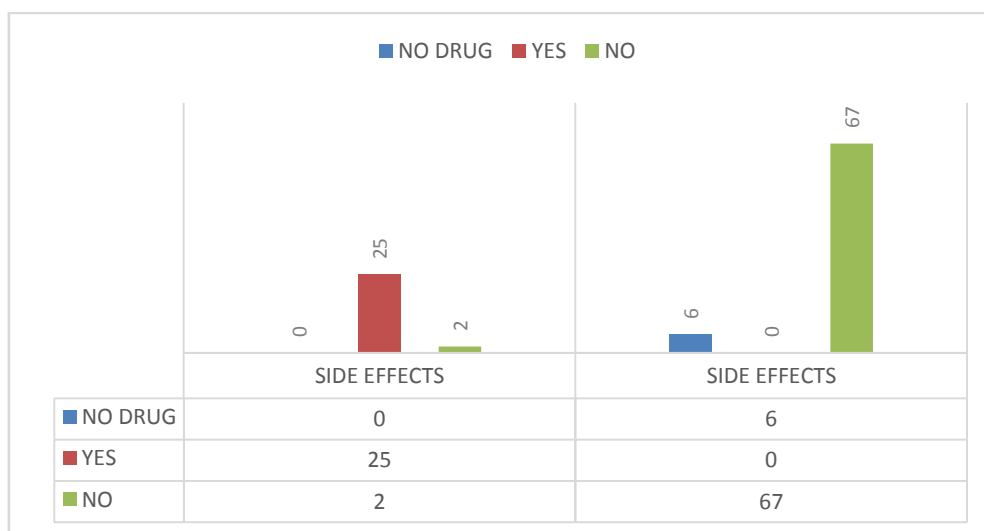


Fig 11: side effect of control population in both phases

Out of 27% of control group, have side effect in phase 1, 25% of control population have side effect in phase 2 and 2% of control group have no side effect in phase 2. 6% of control group, did

not have side effect during phase 1 and they were completely free from self-treatment during phase 2. 67% of control group was free from side effect during both phases.

TEST PHASE

Table:9

		SIDE EFFECTS(POSTEXPOSURE)			Total
		NODRUG	YES	NO	

SIDE EFFECTS	YES	10	9	8	27
	NO	10	11	12	33
Total		20	20	20	60

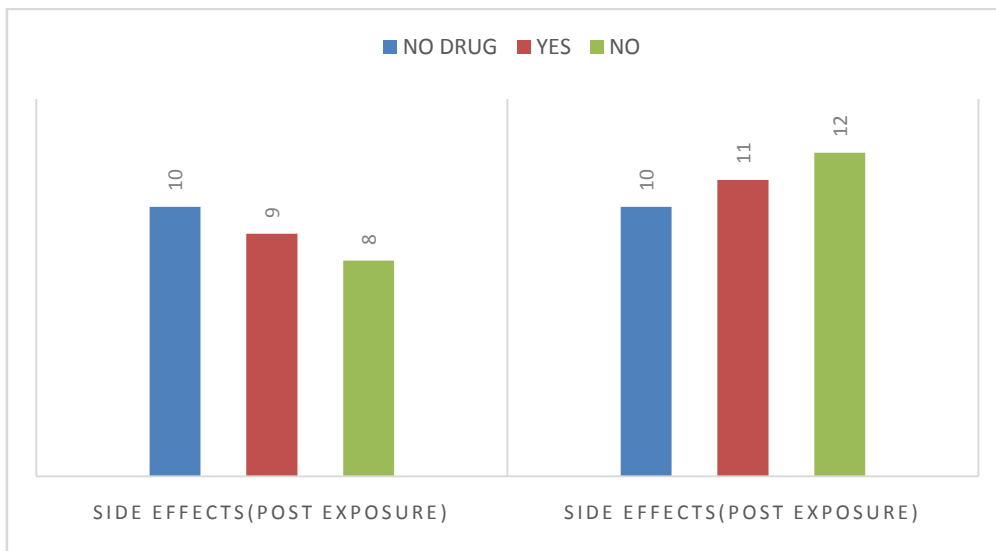


Fig 11a: side effect of control population in both phases

Around 5% of respondents have side effect in phase 1 and they did not take drug in phase 2. 24.75% of the respondents did not have side effect in both phases. 3.96% of respondents

have side effect during both phases. 8.91% of respondents have side effect in phase 1, and no side effects were reported in phase 2. 57% of respondents were free from side effect during both phases.

AWARENESS OF RESPONDENTS ABOUT SIDE EFFECT OF THE DRUGS

Table:10

STUDY GROUP			AWARE ABOUT THE DRUG (POST EXPOSURE)			Total
			YES	NO	LITTLE	
CONTROL	AWARE ABOUT THE DRUG	YES	6	3	4	13
		NO	5	4	7	16
		LITTLE	5	3	3	11
	Total	16	10	14	40	
TEST	AWARE ABOUT THE DRUG	0	1	0	0	1
		YES	6	8	7	21
		NO	7	5	6	18
	LITTLE	9	5	7	21	

Total	22	18	20	60
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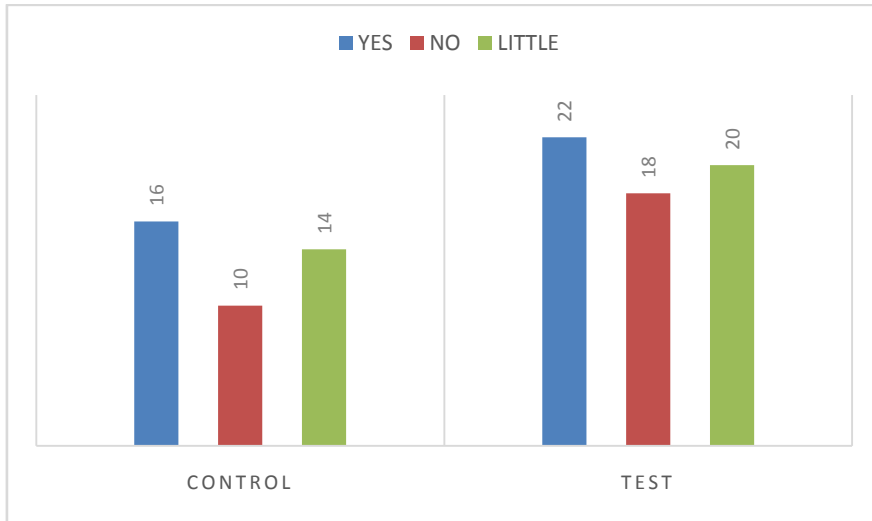


Fig 12 : Aware about the drugs in control group

6% of control group were aware about the self medicament in both phase. 40% of the control group were unaware about self medicaments in

both phase. 25% of the control group have little knowledge about the self medicament in both phase.

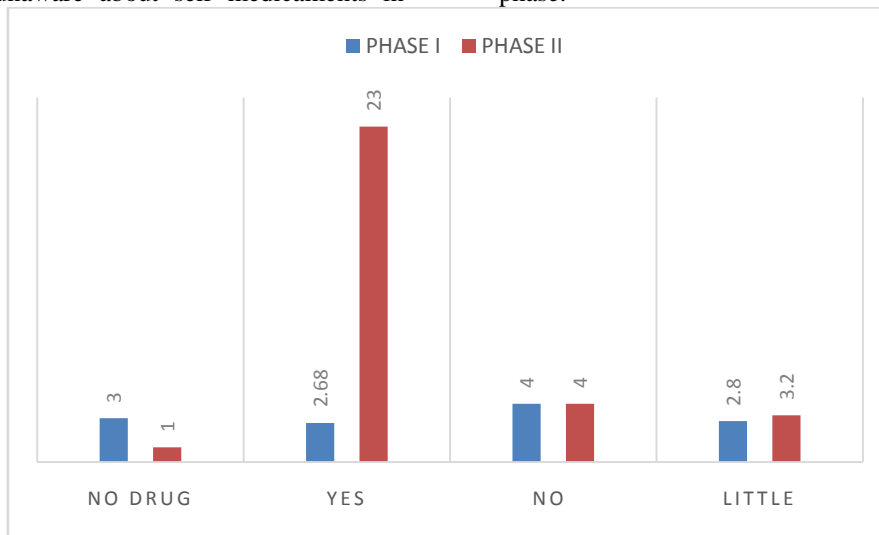


Fig 13 : Aware about the drugs in test group

In test group, 3% have knowledge about self medicaments in both phase. 1% have knowledge about the self-medicament in phase 1 and they did not take self treatment in phase 2. 68 % unaware about the self medicament in phase

1 and become aware phase 2. 23% of test population have little knowledge about the drug in both phase. 4% did not have knowledge about the self medicament and they were aware about drugs in phase 2.

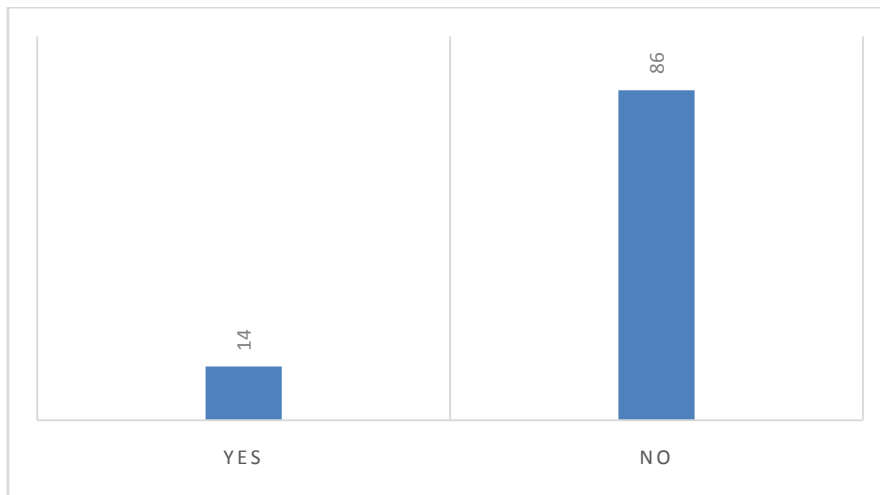


Fig 14: Awareness of test group about DIC

14% of the test population were aware about DIC in both phase .86% of the test population were unaware about DIC in phase 1 and become aware in phase 2.

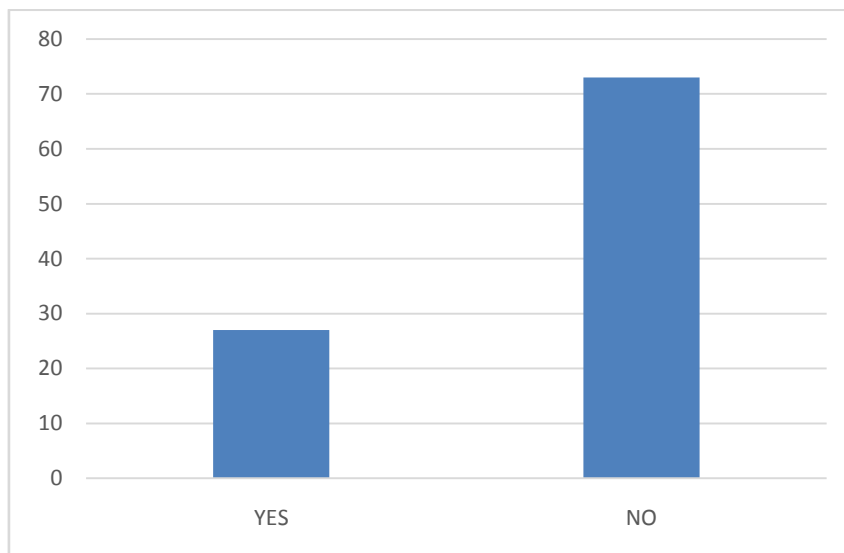


Fig 15: Awareness of control group about DIC

27% of control group were aware about DIC in both phases. 73% of control group were unaware about DIC in both phases.

BEST TREATMENT OPTION

Table:11

PHASE2	STUDYGROUP		Total
	CONTROL	TEST	
SELFMEDICATION	14	29	43

BEST TREATMENT DOCTOR TREATMENT	17	17	34
BOTH	9	14	23
Total	40	60	100

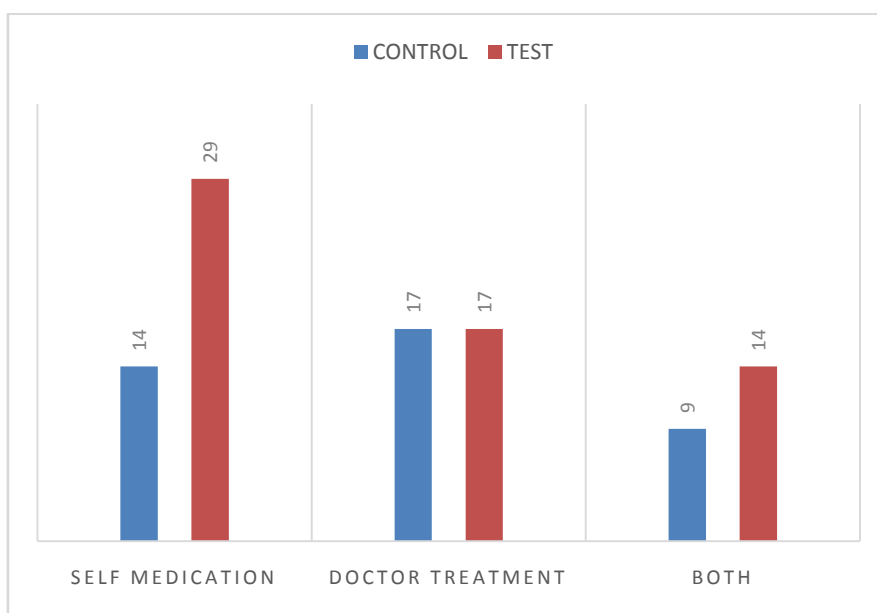


Fig 16 : Best treatment option in phase 2 in both groups

Best treatment options told by the responders were self-medication were higher in control group (60%) then doctors treatment (25%),

and 15% of individual support both treatment. In test group self-medication (33%) then doctors treatment (44%), both responded people (23%).

IMPORTENCE OF PATIENT COUNSELLING

Table:12

PHASE2		STUDYGROUP		Total
		CONTROL	TEST	
PATIENTCOUNSELLING IMPORTANCE	NECESSARY	15	20	35
	NEED	10	15	25
	NOTNEED	15	25	40
Total		40	60	100

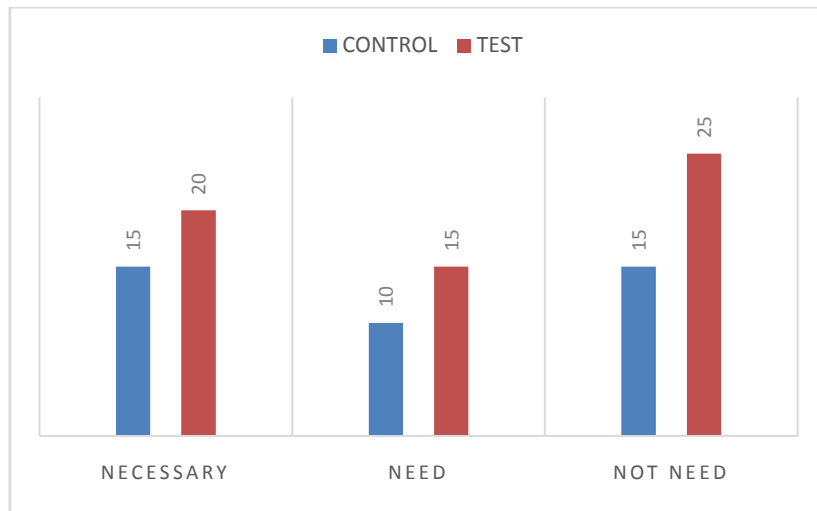


Fig17:Importance of patient counselling

In our study the importance of patient counselling were reported as 30.5% of control group and 35% of the test group said that patient counselling is necessary.18.50% of control group

and 15% of test groupsaid that patient counselling is needed. 1% of control group said that patent counselling is not need.

DRUG INFORMATION SOURCE

Table:13

PHASE2		STUDYGROUP		Total
		CONTROL	TEST	
DRUGENQUIRY	PHARMACIST	25	30	55
	DOCTOR	10	20	30
	OTHERS	5	10	15

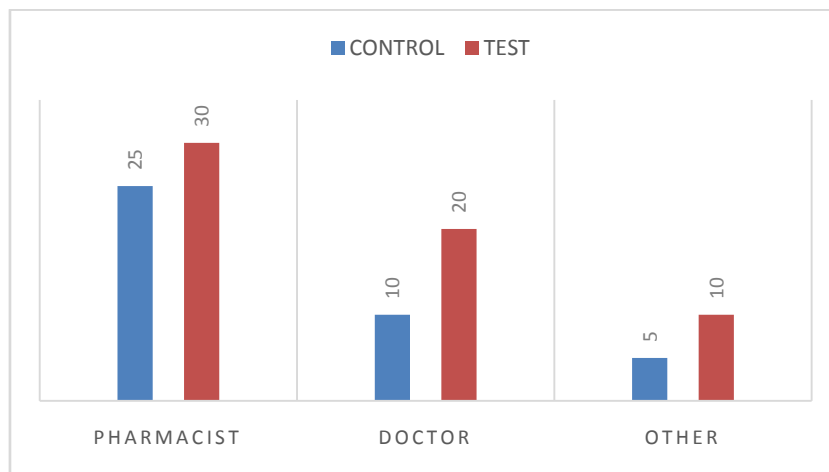
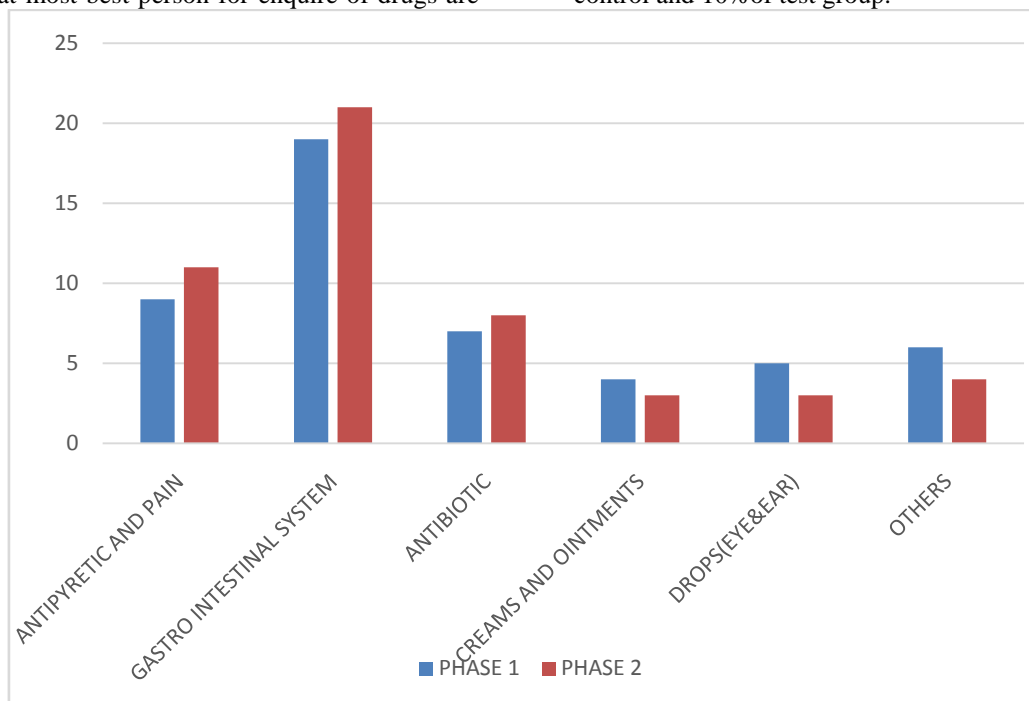


Fig18:Drug information source

In our study, we enquired to patient, who are best for advice about medicine in phase 2. Then we got the result like this, in control and test group said that most best person for enquire of drugs are

the pharmacist (55%) .In test30% and control 25% of respondents said that the doctor is the best. Then others such as relatives friends will be 5% in control and 10%of test group.



DRUG STORAGE IN HOME

Fig 19: Drug storage in home

Among the total storage of drug in phase one study 100 respondents have antipyretic and pains drugs, 20 have gastrointestinal system, 40 have antibiotic15 have creams and ointments 7 , have eye and ear drops 8, have CNS related product, 2 have diabetics and 10 others drugs. In phase 2 storage of drugs was found to be same.

IV. DISCUSSION:

The study was designed to evaluate the effectiveness of counselling and leaflets in Kothagudem population. A questionnaire-based assessment regarding self- medication was performed in both groups. Control pharmacy (group A) and test pharmacy (group B).

The results of our study were consistent with the result of the study carried out by G.Sirisha on comparing the result of gender wise distribution of respondents. It was found that the explanation were provided by males and rest of them were females. As per our study it was found that 54% of the total respondents were females, out of which 34% were young adults and the remaining 58% were older age group. Rest of the 46 % of total

population were males, out of which 34% were young adults and 58% were old age group. The result of age wise distribution of our project opposes the result of study of G.Sirishawhere, 58% of old age group were under OTC purchasing. As per our study young adulthood are having more tendency for OTC purchasing. But during information we obtained another result that female population had more tendency to self-medication than OTC purchasing. It meant that they were taking medicines at home.

The results of our study were consistent with the result of Pankaj Jain et al68 2012, on the aspect that education level of the respondents are important, while considering the self medication pattern. Our study found that, out of 100 respondents with secondary school qualification 19% are more under self medication. This result is very much similar to the study conducted by Pankaj Jain et al where out of 100 respondents who were under self medication are with secondary school qualification. This result concludes that literate people have more tendency to self medication.

Major reasons for self treatment was categorized as lack of time, lack of money and lack of trust in doctor treatment. From this perspectives, our study was supported by the study of G.Sirisha. Both studies reported that the main reason for self medication was the lack of time. As per our study, 25% of respondents practice self medication due to lack of time. The results show that the spot counselling cannot be applied to the OTC purchaser. To these people counselling are the only effective option

Common indication for self medication in our study were consistent with the result of study carried out by G.Sirisha. As per our study it was found that the condition prompting self-medication is more due to pain(26%). And previous study AN also reported that most of respondents were under self- medication due to pain itself. The similar results were also seen in the study carried out by Rekha M S et al⁶¹, 2015 where again most of respondents were under self- medication due to pain. In the pain category include head ache, Throat pain, tooth ache, body pain, etc. antibiotics are taken by respondents for the various conditions like throat pain and fever. From further enquiry we came into an assumption that the purchasing of antibiotics were mainly through old prescription.

On comparing the outcome of phase 1 and phase 2 it was found that

- In phase 1 only 15% of respondents were found to be effective to self medication while in phase II, 17% of respondents was found to be effective.
- In phase 1, 29% of respondents reported that they were not effective to self medication while in phase II, the respondents who were not effective to self medication was reduced to 39%.
- In phase 1, 6% of respondents reported that they were moderately effective to self medication and in phase II it was reduced to 5%.
- In phase 1, 14% respondents were not under self medication and the percentage of respondents who are not under self medication was found to be increased to 18% in phase II.

Regarding treatment outcomes by self medication our study were consistent with the results of the study carried out by Pankaj Jain et al⁶⁸, 2012. The study reported that the treatment outcome was found to be effective in 32% respondents, 11% of respondents were found to be less effective to self-medication and about 68% were found to be not effective to self-medication. Almost similar results were found in our study too. 68% respondents were having effective outcome from self- medication, 11% respondents shows less

effectiveness to self-medication and the remaining 68% were not under self-medication. Both study stated that the treatment outcome was found to be effective for the respondents. In phase 2 study, 18% of control and 15% of test were found to be not consuming self-medicament. 14% of control and 22% of test was effective. 36% of control and 32% of test was not effective. 4% of control and 7% of test are found to be moderately effective. Our study was significant with respect to the treatment outcomes (p value(test=0.000 & control=0.83)).

Knowledge of respondent about the drug is very important. Based on our study report we found that most of them are not aware about the drug. Knowledge of respondent about the drug is very poor. And we also noted that most of them were not getting spot counselling by registered pharmacist. Spot counselling by the pharmacist is a very important aspect for the rational therapy.

We compared the results of side effects that occurred by self-medication in both phase I and phase II and it was clear that there is a increase level of side effects in phase II than phase I. It was clear from the result that the patient is following the counselling given by the pharmacist.

DIC is a novel concept in the perspective of Kothagudem population. Most of them are not aware about DIC. Among those who are aware, most of them are not utilizing the facilities offered by DIC. We gave awareness to public regarding DIC and facilities they provide.

Considering the frequency of self-medication between 2 groups, the frequency was found to be decreased in phase 2, when compared to phase 1. Due to the leaflet and counselling provided, test population became more aware about the irrationality in self-medication. So the tendency for self-medication was reduced to a considerable extent. Our study was significant with respect to the frequency of self-medication (p value(test=40 & control=60))

For awareness about the self-medication to public, we provided leaflets and counsellings only in selected group(test group). A comparison between test group and control group was done.

V. CONCLUSION:

The prevalence of self-medication with the over the counter drug in Sujatha Nagar is high. Self-medication has been a modern trend for more than 10 years. Self-medication is higher in respondents with secondary school qualification, most of the respondent was depended on self-medication due to lack of time, most of the

respondent were female with middle age category. The study found that the main indication for self-medication was pain. The most commonly used self-medication was found to be analgesic and antipyretic, the knowledge of respondents about drug was found to be less and it was also reported that most of them did not spot counselling by the pharmacist on phase 1. Due to counselling and leaflets, test sample have improvement to enquire about the drugs to Pharmacist. In phase 2, we compare the two group, test and control. The effectiveness of drug due to counselling and leaflet was found to be higher in test group. it was also noted that in phase 1 and phase 2 the control group had side effect and test group was free from side effect of self-medication in phase 2, where they had side effect in phase 1.

We also included the new term, "DRUG INFORMATION CENTRE" in our project. DIC is not that much familiar to Kothagudem population. Based on this point of view, we included DIC as parameter in our project. We gathered the information of respondents about DIC and it was found that most of them are not aware about DIC. From our study, test group realise the importance of patient counselling in rational drug therapy. Patient counselling is a important role for rational drug therapy. The household medicine are using as self-medication of future use. It was noted that the amount of house hold medicine storage was found to be decreased in phase 2. That is the frequency of consuming self-medicament in future will increase. Most of the house hold medicine include antibiotic which indicate the less adherence of the patient to antibiotic. And which can lead to antibiotic resistant. We counsel the patient about importance of adherence to antibiotic therapy.

Abbreviation:

OTC-over the counter, DCA-drugs and cosmetics act, DCR-drug and cosmetic rule, CDSCO-central drug standard control organization, DCGI-drug control general of India, OPPI-organization of pharmaceutical procedure of India, FDA-food and drug administration, DIC-drug information centre, DGHS-directorate general of health service.

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Conflict of Interest:

The author declares no conflict of interest.

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