EFFECTIVENESS OF PHARMACIST INVOLVEMENT ON SELF-MEDICATION IN COMMUNITY SETTING

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Submitted by

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MAY – 2019

EVALUATION CERTIFICATE

This is to certify that this dissertation work entitled **"EFFECTIVENESS OF PHARMACIST INVOLVEMENT ON SELF-MEDICATION IN COMMUNITY SETTING"** is the Bonafied work carried out by **PREENA M NARAYANAN, Register No: 261540712** under the guidance of **Dr. ANISH KUMAR, Pharm D.,** Assistant Professor, Department of Pharmacy Practice, for the partial fulfilment of the requirement of award for **Master of Pharmacy** and this is forwarded to **The Tamilnadu Dr. M.G.R Medical University, Chennai** during the academic year **2018 – 2019** has been evaluated on_____

Evaluators:

1. 2.

CERTIFICATES

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DECLARATION

I Hereby I declare that this thesis work **"EFFECTIVENESS OF PHARMACIST INVOLVEMENT ON SELF-MEDICATION IN COMMUNITY SETTING"** is the Bonafied work has been originally carried out by myself under the guidance and supervision of **Dr. ANISH KUMAR, Pharm D.,** Assistant Professor, Department of Pharmacy Practice, Padmavathi College of Pharmacy and Research Institute, Periyanahalli, Dharmapuri, Tamilnadu. I also declare that the matter embodied in its original and the same has not previously formed the basis for the award of any degree, diploma, associateship or fellowship of any other university or institution.

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DEDICATED TO

MY BELOVED FAMILY,

TEACHERS AND FRIENDS

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LIST OF ABBREVIATIONS AND SYMBOLS

Abbreviations	**Definition**
FDA	Food and drug administration
OTC	Over the counter drug
DCA	Drug and Cosmetics Act
DCR	Drug and Cosmetic Rule
CDSO	Central Drug Standard control organisation
NSAIDs	Non steroid anti-inflammatory drugs
PPA	Phenyl propanol amine
ADR	Adverse drug reaction
DIC	Drug information Centre
DI	Drug interaction
CI	Contra indication
SM	Self-medication
NPM	Non-prescription medicine
QOL	Quality of life
PIL	Patient information leaflet
ST	Self-treatment

1.0 INTRODUCTION

1.01 Overview

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 Non prescription 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]

1.02 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) l 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

objectives, selection of a product to be used, determination of an appropriate dosage and dosage schedule, taking into account the person's medical history, contraindications, concomitant diseases and concurrent medications, and monitoring of the response to the treatment and of possible adverse effects. In the case of non-prescription medicinal products, all of the information required to permit safe and effective use must come from the labelling material, patient information texts, the individual's previous personal experience, various sources of information in the media, advertising, and advice given by health care professionals.[9]

Universally, consumption of OTC drugs by self medication has become as an ineluctable part of daily lives of the common man in spite of the cognizance of its hazards. A survey conducted on behalf of the Proprietary Association of Great Britain showed that 16% of adults with a minor ailment would usually purchase an over-the-counter medicine to deal with it and a further 14% would use an over-the-counter medicine that they already had in the house. Other national and international surveys similarly point to the fact that for every one prescription medicine taken there is probably at least one non-prescription medicine consumed.[11] The OTC drug market in India currently ranks 11th in the global OTC market. This trend is increasing and is expected to reach 9th position within next 5 years. Since Indian patients have a huge tendency of self treatment, The Indian market is characterized by a huge demand for OTC drugs.[12] In India, there are many factors such as ignorance, lack of awareness, poor socio-economic status, lack accessibility to health care that play a major role in the usage of OTC use of medicines. In addition, advertisements and marketing persuades the general population to buy the medicines without a prescription.[13]

1.03 Benefits and Risks of OTC drug use

1.03.1 Benefits of OTC use from Different Perspectives

1.03.1.1 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]

1.3.1.2 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. Indeed, doctors have become more supportive of self-medication and further deregulation, which may

reflect their increasing confidence in the deregulatory process and in the ability of the pharmacist to diagnose, treat and refer patients to a doctor when necessary.[1]

1.03.1.3 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]

1.03.2 Risks Associated with OTC Drug Use

However it is not always safe and has been associated with negative health consequences. Increasing availability of non-prescription medicines may encourage patients to believe that there is a drug treatment for every ailment. Furthermore, the use of such products may delay/mask the diagnosis of serious illness, with increased risks of interactions and adverse reactions and of self-treatment being undertaken when medical aid should have been sought. There is also the potential for misuse and abuse of such products. In India, OTC related adverse effects, abuse, and hospitalizations are on the rise.[12]

1.03.2.1 Misuse and Abuse Potential of OTC Drugs

The terms ‘misuse' and ‘abuse' are often used interchangeably, but they have precise meanings in this context. Misuse is defined as using an OTC product for a legitimate medical reason but in higher doses or for a longer period than recommended, e.g. taking more of a painkiller than recommended to treat headache. Abuse is the non-medical use of OTC drugs, e.g. to experience a ‘high' or lose weight.[15] All drugs have the potential to be misused while abuse is largely associated with those products containing opioids, antihistamines and laxatives. It should be noted that it could be difficult to classify the inappropriate use of a product by an individual as being abuse or misuse. It is also possible that the initial misuse of a product by an individual for a genuine medical purpose, but at an increased dosage, may develop into abuse.[1] Intentional drug abuse of prescribed and OTC medicines has climbed steadily. Data from the 2005 National Survey on Drug Use and Health demonstrated that 6.4 million (2.6%) people aged 12 or older had used prescription drugs for nonmedical reasons during the past month. Of these, 4.7 million used pain relievers, 1.8 million used tranquilizers, and 1.1 million used stimulants. The nonmedical use of prescription drugs in the past month among young adults aged 18 to 25 increased from 5.4% in 2002 to 6.3% in 2005, primarily because of an increase in the abusive use of pain relievers.[18] Strong relationships between paracetamol sales and non-fatal overdoses in England and France have been reported and rising sales are associated with increasing abuse resulting in liver damage, non-fatal self-poisonings and suicides.[16] Drug abusers have tried to exploit the central actions of OTC medicines such as cyclizine as alternatives to less readily available drugs.[2]

1.03.2.2 Drug Interactions

The wider availability and use of some drugs with considerable interaction potential, for example H2-antagonists, might increase the risk of drug interactions. Cimetidine can interact with fluoxetine (resulting in extrapyramidal syndrome) and theophylline, and also affects the metabolism of warfarin and phenytoin.[17] Some have marked central actions if taken in doses in excess of those recommended by the manufacturer, or even, in the case of anti-emetics such as hyoscine, in therapeutic doses. If taken without supervision by patients already receiving centrally acting drugs, dangerous summations of effects may occur. For example, Contac capsules, possessing both central nervous depressant and anticholinergic properties, can summate with other drugs possessing similar pharmacological properties such as tricyclic antidepressant drugs, to produce delirium and severe behavioural disorders.[2] As the number and range of drugs available increase, drug interactions between simultaneously taken over-the-counter medicines and between over the counter medicines and prescribed medicines will inevitably increase. The potential for such problems is particularly great among elderly people: they are generally more ill, more likely to self-medicate and more likely to be already taking more prescription medicines than younger people [12]

1.03.2.3 Adverse events

OTC related adverse effects are predominantly gastrointestinal complaints, allergic reaction, psychosis, tachycardia, seizures and dizziness leading to increase in the number of hospital admissions. Exposure to OTC non-steroidal anti-inflammatory drugs (NSAID) is substantial and leads to increased risk of gastrointestinal bleeding.[12] The intake of diclofenac, ibuprofen and naproxen

increase the risk of gastrointestinal complications by about 2-4 times and doubles the risk of heart failure requiring hospital admission. Paracetamol, a common and easily accessible drug in many countries and included in approximately 150 preparations carries risks of intoxication with 10 to 15 g reported as hepatotoxic for adults and 25 g can be life-threatening. In the US, 458 people die per year because of paracetamol overdose and about 100 of these are accidental.[17] There are reports that phenylpropanolamine (PPA) is the major ingredient in more than 70 over the counter preparations. PPA has been recently associated with neurological manifestations including psychosis, seizures and intracerebral haematoma. Rare cases of optic neuropathy, nephritis, toxic epidermal necrolysis, Henoch-Shoenlein purpura, and acute liver disease have been reported with cimetidine, ranitidine and/or famotidine.[18] As all drugs have the potential for adverse reactions, it is of great interest to evaluate the safety profile of OTC drugs. However, there are few safety data available for OTC drugs. This may be due to several methodological difficulties regarding the assessment of drug exposure and ADRs. Prescription databases which are widely used for analysing ADRs associated with prescription drug utilization cannot be used for OTC drugs. Thus, pharmacy centred studies are required, but a complete medication history is difficult to obtain in this setting. Non-recognition of OTC drugs as ‘drugs' by patients, and incomplete medical histories taken by physicians, may contribute to uncertainties in evaluating OTC drug-related ADRs.[18] OTC related emergency room visits increased by 70% from 2004 to 2008. The Drug Abuse Warning Network estimates that of the 2.1 million drug abuse hospital visits in 2009, 27.1% involved non medical use of OTC medications and dietary supplements. Published literature mentions that the mean age for the purchase of OTC drugs in India is 32.7 years with female preponderance.[19] In

1999, the FDA estimated the ratio of hospitalizations due to adverse events from all medications (prescription and OTC) to be 5.5%, and the ratio of hospitalizations due to adverse events specifically from OTC drugs to be 0.55% (corresponding to 170,500 of 31 million annual hospitalizations). A study of 2004/2005 data by the Centres for Disease Control and Prevention (CDC) showed that over 70,000 children annually were brought to emergency departments for medication overdoses. Four fifths (82%) of emergency department visits for medication overdoses resulted from unsupervised ingestions of prescription and OTC drugs, with peak incidence in two-year-olds.[4]

Another concern is that patients will use over-the-counter medicines for what are in reality serious, life-threatening illnesses, thereby masking symptoms and delaying further intervention. H2 receptor antagonists may mask the symptoms of severe diseases such as gastric cancer. Other potential problems are that: patients may buy the wrong preparation of the drug for the condition; the drug may be administered or taken incorrectly; or the drug may be taken in higher or lower doses, or for a longer or shorter time, than is recommended or intended. Furthermore, patients may not refer to general practitioners when they should.[11] The overall extent of the problem in the population is very difficult to quantify. This is partly due to the fact that there is little record keeping or monitoring associated with non prescription drug transactions, and hence, doctors and pharmacists may be unaware of patients who are using products incorrectly. This incorrect use may stem from incorrect self diagnosis in the first place. A minority of patients were able to diagnose correctly upon reading the case scenario; a previous diagnosis had only a moderate impact on the patient's ability to correctly diagnose a case.[1]

1.04 Labelling of OTC Drugs

Although OTC drugs are supposed to be relatively safe, readily available and consumed by the patients without a physician's consent, it is very important that the patient have access to sufficient information to make an informed choice for the proper use of these drugs. There are misconceptions regarding the informed self medication among the members of community. Therefore it becomes vital to provide complete usage information on the labels or in the packages in the absence of informed self medication. This not only ensures safety but also boosts patient compliance to therapy with patient education. The basic way of conveying information for OTC medicines for their safe and effective use is through medicine labels. In the Federal Registerof March 17, 1999 (64 FR 13254), the FDA published a final regulation establishing standardized content and format for the labelling of OTC drug products (Drug Facts labelling). The Drug Facts labelling for OTC drug products is intended to make it easier for consumers to read and understand OTC drug product labelling and use OTC drug products safely and effectively. According this guideline, it is required that all OTC drug product labeling contain the following information about the drug product. This information must be organized according to the following headings and must be presented in the following order:

- Title
- Active ingredient(s)
- Purpose(s)
- Use(s)

- Warning(s)
- Directions
- Other information
- Inactive ingredients
- Questions? or Questions or comments? (optional)

This information must appear on the outside container or wrapper of the retail package, or the immediate container label if there is no outside container or wrapper.[22] But in India, there are no guidelines specifically for labelling of OTC drugs. However, both prescription and OTC drugs in India should comply with the mandatory requirements as per Drugs and Cosmetics Act 1940. Drugs and Cosmetic Rules 1945 (manner of labelling), mandates the minimum information which needs to be put on the label of all medicines and are the following:

- Generic and Trade name
- Net contents and content of active ingredient
- Name and address of manufacturer including manufacture license number
- Batch number, manufacture and expiry date
- Maximum retail price.

These requirements are product oriented when compared to US FDA labeling requirements which are patient oriented.[7,23]

1.05 Pharmaceutical Advertising

Pharmaceutical advertising has a great impact on patients' use of OTC medications. The key element of advertisements is the brand name of the product; information concerning its application is generally limited to an instruction to seek pharmacists' advice. Pharmaceutical companies would like to improve the advertising of their products, providing adequate patient information while referring to pharmacists for specific recommendations. However, to date, their efforts have not brought about the desired results. Doctors and pharmacists believe that advertisements with short texts cannot provide exact adequate information that would lead to confidence in choosing the right products. Consequently, efforts are required from both the industry and the pharmacists to improve advertisement quality. Advertisements, due to their short character, approach the problem from a single point of view; they operate with a simple attractive advertising slogan (e.g. ‘fast-acting'). As a result, individuals often base their decisions on these marketing promises rather than any real medical understanding. The lack of sufficient information prior to self-medication can lead to delayed evaluation by a health care professional, misunderstanding of the true health problem and possible serious health effects.[20]

1.06 Effect of Switches from Prescription-Only to Over-The-Counter Availability

The reclassification of medicinal products from sale on prescription only to non-prescription or over-the-counter sale is of great current interest in many countries. Drug regulatory and health authorities have to consider the types of

medicinal products for which reclassification are appropriate, safe and rational in the interest of public health. It has become widely accepted that self-medication has an important place in the health care system. Recognition of the responsibility of individuals for their own health and awareness that professional care for minor ailments is often unnecessary has contributed to this view. Improvements in people's general knowledge, level of education and socioeconomic status in many countries form a reasonable basis for successful self medication. New drugs with specific pharmacological action, such as histamine H2-receptor antagonists, nonsteroidal anti-inflammatory compounds (NSAID) and nicotine preparations for cessation of smoking, have been successfully reclassified from prescription to non-prescription status in many countries. Regulatory assessment of a change from prescription to non-prescription status should be based on medical and scientific data on safety and efficacy of the compound and rationality in terms of public health.[9] In the past, only well-established drugs that had been on the market for many years were available as OTC drugs; however, in recent years, many modern and highly efficacious drugs like statins, levonorgestrel, and triptans were switched to OTC status in some European countries. A yearly increase in such prescription-to-OTC switches has been reported for the UK. In Germany, omeprazole became available as a non-prescription drug in 2009, and several analgesic drugs have undergone prescription-to-OTC switches in the past (e.g. ibuprofen 400 mg has been a non-prescription drug since 1998). Since ibuprofen 400 mg is also available as a prescription drug, this medication, as well as others that are available both OTC and by prescription, are considered as ‘potential OTCs'. Patients' risk awareness is lower with respect to OTC drugs than for drugs prescribed by physicians.[18] The initiative for the review of prescription products or any new product that might reasonably be released for

self medication has generally been taken by the pharmaceutical industry in the form of documented proposals to national drug regulatory authorities. Occasionally, such authorities have themselves taken steps to reclassify medicinal products to make them available for self medication. In some cases, moreover, products have been changed back from self medication to prescription drug status because new safety issues have arisen. This underlines the fact that it is of crucial importance carefully to monitor the use of medicinal products and post marketing data on adverse effects to be able to respond adequately and quickly to possible harmful developments.[9] All the indications are that the reclassification of drugs from prescription only to pharmacy only status will continue. This might, in the long term and if not handled properly by general practitioners and pharmacists, generate additional drug-related morbidity in patients. In order for patients to gain the benefits of drug reclassification and yet avoid the pitfalls it is important that general practitioners respond to the new challenges presented by the emerging liberalization of drug classifications. Changing a drug from prescription-only to over the counter availability may benefit and harm the patients and the health care delivery system in several ways. The possible benefits are as follows:

- Increased access to effective drugs
- Decreased frequency of visits to physicians, leading to lower health care costs
- Improved education of consumers
- Increased autonomy of patients
- Decreased costs to third-party payers

Whereas the following are the risks associated with OTC switch:

- Inaccurate diagnosis by patients, based on symptoms
- Delay in obtaining needed therapy
- Use of suboptimal therapy
- Increased resistance to antimicrobial agents as a result of inappropriate use
- Increased costs to patients
- Failure to follow label instructions and warnings
- Adverse effects
- Drug interactions
- Perceived loss of control by physicians[21]

1.07 Role of Pharmacist

Pharmacists in particular can play a key role in giving advice to consumers on the proper and safe use of medicinal products intended for self medication. It is important, therefore, to take this role into account both in their training and in practice. In 1993, the charter of collaboration between the Pharmaceutical Group of the European Community (PGEC) and the European Proprietary Medicines Manufacturers' Association (AESGP) noted the following: "The pharmacist is an adviser to the public on everyday health care and is a key figure in the supply and delivery of medicines to the consumer. He is a partner of the manufacturer of non-prescription medicines. Both share the common goals of service of high quality for the patient and encouragement of the rational use of medicines. The pharmacist in his professional capacity and in direct contact with patients is competent to provide

sound advice on the medicines he supplies". The pharmacist has several functions, outlined below:

As a communicator :

- The pharmacist should initiate dialogue with the patient (and the patient's physician, when necessary) to obtain a sufficiently detailed medication history;
- In order to address the condition of the patient appropriately the pharmacist must ask the patient key questions and pass on relevant information to him or her (e.g. how to take the medicines and how to deal with safety issues);
- The pharmacist must be prepared and adequately equipped to perform a proper screening for specific conditions and diseases, without interfering with the prescriber's authority;
- The pharmacist must provide objective information about medicines;
- The pharmacist must be able to use and interpret additional sources of information to satisfy the needs of the patient;
- The pharmacist should be able to help the patient undertake appropriate and responsible self medication or, when necessary, refer the patient for medical advice;
- The pharmacist must ensure confidentiality concerning details of the patient's condition.
- As a quality drug supplier :
- The pharmacist must ensure that the products he/she purchases are from reputable sources and of good quality;

- The pharmacist must ensure the proper storage of these products.

As a collaborator :

It is imperative that pharmacists develop quality collaborative relationships with:

- Other health care professionals;
- National professional associations;
- The pharmaceutical industry;
- Governments (local/national); and,
- Patients and the general public.

In so doing, opportunities to tap into resources and expertise, and to share data and experiences, in order to improve self-care and self-medication, will be enhanced.

As a health promoter :

As a member of the health-care team, the pharmacist must:

- Participate in health screening to identify health problems and those at risk in the community;
- Participate in health promotion campaigns to raise awareness of health issues and disease prevention; and
- Provide advice to individuals to help them make informed health choices.[24]
- When the patient requests a consultation regarding a non prescription drug, the pharmacist shall collect information to assess the patient's knowledge and needs before providing advice.

- The pharmacist shall introduce themselves to patients seeking advice or patients exhibiting behaviour suggesting confusion over product selection.
    - ❖ The pharmacist shall question the patient regarding:
    - ❖ The symptoms or condition being treated;
    - ❖ The history of the complaint including, but not limited to, length of time symptoms have been present, other therapies tried, and seriousness of illness;
    - ❖ The patient's pertinent medical history including, but not limited to, past/present medications, current disease states, sensitivities, allergies and adverse reactions, dietary restrictions; and
    - ❖ Confirmation of pregnancy, possible pregnancy, or breast feeding.
    - ❖ The pharmacist shall consider all the information before recommending a therapy for the patient, including but not limited to:
    - ❖ Potential or actual drug interactions with current medications; and
    - ❖ Potential or actual age/food/disease related interactions.
- The pharmacist shall use other methods to determine health status, as per provincial law, such as:
    - ❖ Available lab values;
    - ❖ Other health indicators, such as blood pressure; and
    - ❖ Referring to the patient's medication profile or electronic health record, if appropriate.

- The pharmacist shall refer the patient to another health care professional when the pharmacist has deemed the condition to be one of a serious nature, is unsure of the diagnosis, or cannot be treated appropriately with non-prescription medications.
- Once the pharmacist recommends a treatment, they shall advise the patient to contact the pharmacist, or another health care professional if there is no improvement, or worsening of symptoms.
- When the patient asks for a product by name the pharmacist shall use this opportunity to assess the patient's knowledge about the product and provide additional information if required.
- The pharmacist shall provide the following information to the patient:
  - ❖ name of the drug(s) and dosage;
  - ❖ expected length of therapy;
  - ❖ expected benefit(s) and when improvement shall be noticed;
  - ❖ adverse effects, allergic reactions;
  - ❖ expected outcomes of the disease process and suggested therapy;
  - ❖ non pharmacological measures, if any; and
  - ❖ an alternate plan if the therapy is not palliative or the symptoms change or worsen.[25]

1.08 Role of General Practitioner

General practitioners also has vital role to play in influencing the patients in consultation. In the course of providing the history of the presenting complaint, the

patient may give details of self medication; the general practitioner may or may not encourage this self medication.' Also, rather than issue a prescription, the general practitioner might suggest that the patient purchase appropriate medication. Enquire about patient's current self medication so that the possibility of adverse events or of interactions between over-the-counter medicines and prescribed medicines, causing the patient's problem might be considered. For some treatments, such as warfarin, it should be recommended that patients should not self medicate without conferring with their general practitioner, because of the risks of interaction. As professionals generally concerned with health issues, general practitioners should have an interest in how all medicines are used by patients. As the number and range of pharmacy only medicines available increases, it can be predicted that the probability of a patient having taken a medicine before consulting a general practitioner will increase rather than decrease. Furthermore, as the distinction between prescription only and pharmacy only medicines diminishes in terms of potency and potential for clinically important interaction, it becomes important that the general practitioner enquires in detail into the medicines that patients may have taken on their own initiative. If general practitioners do start to enquire more consistently and diligently into patients' self medication practices, they must learn how to interpret the data that are gathered. General practitioners have been greatly assisted in this by the publication of the OTC directory that lists 816 products said to represent 95% of the market.' The bewildering array of over-the-counter medicines available and the particularly alarming fact that preparations with essentially the same name can contain different ingredients make determination of what the patient has taken difficult in some cases. General practitioners should encourage patients to bring the packaging of their self medication to consultations. Furthermore, if general

practitioners ask patients about their self medication, patients will inevitably ask whether or not they approve.[11]

1.09 Tele counselling

Tele counselling refers to any type of psychological service performed over the telephone. Telephone counselling ranges from individual, couple or groups to psychological first aid provided by paramedical professional counsellor.

A recent study found that more than half of clients (58%) who had experienced both in personnel and telephone counselling, preferred phone counselling. A 2002 study found that phone counselling clients rate their counselling relationship similar to in person counselling. [26]

On 2013, Tamilnadu Government launched a round the clock health help line where resident of the state could dial "104" and get medical advice information about first aid , HIV / mental health counselling and also register complaints against service provided a government hospitals and primary health centres .

Advantages:

- Provide direct access for people
    - Living in remote area where there may be limited transport and few, if any local therapist.
    - With certain disabilities ,e.g.: people who are less mobile
    - With social anxiety or phobias

- With long term illness and their careers, who may be unable to leave them
- Who do not have child care
- Without lengthy waiting list.

- Clients can have counselling in the comfort of their own surroundings, enabling them to relax and open up more easily. client may feel anxious embarrassed self-conscious or simply nervous working face to face with a counsellor
- No travelling time or expense incurred
- Anonymity is preserved and may be enhanced helping to reduce any perceived stigma involved in having counselling[27].

Disadvantage:

- Telephone counselling will not be appropriate for all clients in all situation .Our service not suitable for those who are suicidal or those who are under the age of consent(less than 15)
- telephone counselling may not be appropriate for people with certain disabilities e.g. person with hearing disabilities, those with special needs to take the medicine.
- People with psychosis, severe personality disorder and people with drug and alcohol addiction .
- lack of visual communication may be a limitation for some clients and counsellors , but not necessarily for everyone. [27]

1.10 Drug information centre

Drug information Centre has existed more than 20 years. Well over 100 cLITERentres function across the country, primarily affiliated with hospitals and college of pharmacy. The centres serve an audience of primarily health professionals but in some settings meet consumer need. Established a Drug Information centres in Al Shifa Hospital, Perinthalmanna, Kerala are registered under "The Society of Hospital Pharmacists of Australia (SHPA)", a tertiary level referral hospital in association with the Department of Pharmacy Practice of Al Shifa College Of pharmacy in the year of 2009 .This DIC is the first of its kind in Malappuram district, Kerala.[28]

1.11LEAFLETS

Leaflets that are folded are usually used for advertising or marketing purposes, or for information supplementary to public.Individuals might have many different reasons to make a leaflet or other piece of literature for printed distribution. Making leaflets, brochures and pamphlets is something people often do when they are starting a small business. Leaflets are also useful for creating an awareness campaign at public. Regardless of the reason, you must first plan, design and build a leaflet before you can effectively distribute them to your target audience. Leaflets should be organized and kept simple. To keep your sentences simple, try reading them aloud to yourself. If you're finding that you struggle over words, your sentences may be too complex or difficult to understand. Avoid jargon and abbreviations[a]

Patient is an end user of medicine. Patient medication leaflets are usually provided for patients in many countries when they are on mediation. It is important to provide the information of medicine to patient through health care professionals. Due to the lack of time the health care professionals can't share the leaflet information to patient effectively. So Malayalam leaflets are essential.

Advantage

- Cheap and easy to produce.
- Certain information relevant for the individual.
- Information is easily shared with family and friends.
- Ensure consistency of information.
- Become a resource for informing staff who are new to the specialty.

Disadvantage

- Some material may be produced for general issues and so may not be individualised
- Can be misplaced or lost.
- Professionally produced materials may be costly and may take longer to update.
- Someone needs to do the ground work for developing the resource.
- Could remain unused unless the reader is motivated to know more.
- If badly produced, may do more harm than good.

1.12 Significance

Despite receiving intensive training in medication management, pharmacists are still on the fringes of the primary health care team and are often seen more as shopkeepers than health professionals. They have limited opportunities to see patients in a primary care setting as part of a practice team. Direct contact with patients is brief and impromptu, with insufficient time for detailed private consultation. Most consultations last 1 - 3 minutes. The presence of a private consulting area in the pharmacy does not increase the number of consultations, although their length is increased slightly.[20] In USA, the FDA has laid down clear cut guidelines for the labelling of OTC drugs sold in the country whereas no such labelling guidelines exist for OTC drugs sold in India. Furtherance in the pharmaceutical industry has led to the production of powerful medications of various dosage levels, which when prescribed appropriate acts as a curative agent by enhancing the quality of life. However, inappropriate use of medications due to easy availability of the drugs, increased number of pharmacies in the vicinage, and the attitude of self-medication can have a serious health consequence, which is a larger public health issue. Hence, it deserves a revamped scrutiny, especially in developing countries like India to know deep in the site on this public health problem by conducting a community-based qualitative research.

2.0 LITERATURE REVIEW

2.1 A cross- sectional study on the prevalence of self medication in a Chennai based population, Tamilnadu, India

Vinithra Varadarajan, etal:-Analytical cross sectional study was conducted . The overall prevalence of self medication use in the last three months was found to be 51.7% with a 95% CI of 44.7-59. Self medication use was 2.07 times more common among subject aged above 35 year of age and this association was statistically significant(p value= o.o16). The commonest reason quoted for the practice of self-medication was financial constrains (40.80%) and the commonest aliment for which self medication was practiced was quoted as commoncold (73.2%) . (int j. Community med public health 2017 feb 4(2), (418 -423).

2.2 Utilization of medicine available at home by general population of rural and urban setup of western India

Nazima Mirza, Barna Ganguly (2016):- A cross sectional study was conducted the utilization pattern of medicine available at home with special attention to the types of medicine and their appropriate utilization and indented self medication. Data were collected from 800 house. 400 each from urban and rural areas and then analysed for details of medicine available in the house as (i) number of homes having medicine, (ii) number of formulation with and without prescription, (iii) number of formulation with package insert and expired formulation, (iv) dosage form of medicine,(v) pharmacological class wise distribution of medicine,(vi) status of the medicine use whether for current use. Obtained results was medicine available in 93.75%houses,more medicine formulation (16.76%) were found without

prescription in urban area than rural(11.82%). Highest number of dosage form found were that of tablets (62%). Among the prescribed medicines majority of cardiovascular disease(19.88%)and from without prescription medicine NSAIDs were the major group available at home (35.13%). The left over medicine with prescription 20.39% and without prescription 13.7%.Only 2.91% medicine were along with package insert and 2.94% crossed the expiry dates. [Journal of clinical and diagnostic research, 2016Aug, vol10 (8), fc5-fc9.]

2.3 Household storage of medicines and associated factors in tigray region, Northern Ethiopia

Abrahim wondimud etal(2015):-A community based cross sectional study was conducted in April 2013 in Tigray region Etiopia .The presence of medicine in house hold is a risk factor for irrational drug use .This study aimed at investigating the prevalence and factors associated with home storage of medicine in Tigray region Etiopia. 1034 participants were enrolled in the study .A multistage sampling method was employed to select households .Data collected with the help of questionnaire and analyzed using statistics of the household visited ,293 stored drugs were found. Most common classes of drugs analgesic -29% and antibiotics 25% medicine ongoing treatment 62% available as tablet dosage form 70%. In rural area the proportion of home storage of medicine was lower than that of urban area and increased home storage of medicine is found in family members working in health facilities. It is found that most of the drugs kept at home were not appropriately labeled and stored in safe places. Residence area and the presence of health professional in the house hold effect the house hold drug storage. Hence public

education campaign should be considered as an intervention to improve the storage condition of medicine in house hold. [Journal.pone,0135650,2015 ,aug ,1-9]

2.4 Usage of over the counter and herbal products in common cold in Poland; findings froms consumer survey

Upper respiratory tract infections were usually self treated with synthetic and herbal over the counter products. Oral synthetic product were used by 76% of respondents, while herbal product by 30%. Synthetic product were used mainly by educated people under the age of 65, students and employed. Herbal products were used mainly by older people. (Advances in experimental medicine and biology 2015aug. Page no 1 - 12)

2.5 A study on knowledge and practices of over the counter medication amoung 2nd year medical students

Aritra Ghosh, etal (2015):-A questionnaire based study was conducted among 250 numbers of 2nd year medical students. Among the participants ,84% know what is OTC drug and 71% know which fall under OTC category . They took self medication approximately 4 to 5 times on average in last one year .most common conditions/symptoms for self-medication were fever (89%),cough and cold(75%), headache(67%), diarrhoea(33%),any type of pain (53%) followed by minor cut, vomiting. Antipyretics(82%)cough and cold preparation (51%)and pain killers(49%) were the most common medicine taken. OTC medications are widely used among medical students who studying pharmacology. [World Journal Of Pharmacy And Pharmaceutical Sciences2015, 4thvol, 7 , 1074 -1081]

2.6 A study on use of over the counter drugs among 1st year medical students in tertiary care teaching hospitals.

Rekha MS etal (2015):-A cross sectional questionnaire based study conducted , it was seen that majority (82.6%) of the participants were aware of OTC drugs. Self medication was seen among 56.6% of the medical students. Headache (76.3%) followed by fever were the most common aliment for which analgesics (60.1%) followed by antipyretics were the most common OTC drugs used. Confidence in self-medication (46.2%), finding it cumbersome to go to doctor where the some of the reason for using OTC drugs. Media advertisement (32.3%) followed by textbook/journals were the most common source of information used to know about OTC drugs. Large number of students were aware of package insert/prescription label(81.5%) and also they followed label instructions while self-medication(88.4%). [Journal of pharmacology and toxicological studies.vol3 ,issue1,feb-may2015, 20-24]

2.7 Evaluation of self-medication practices in rural area of town Sahaswan at Northern India.

A. Ahammed etal (2014):-Cross sectional study was conducted about the prevalence of self medication. The percentage of patients who were seeking self-medication was approximately 50%(300/600). Most of the patients where seeking self-medication for headache, other pain(23.3%),fever(14.5%),UTI(9.7%) and respiratory tract infection (11.7%). The drug most commonly purchased for practicing self medication where NSAIDs (25.3%). Medication used for gastric problem (20.8%),and antibiotic(16.7%). [Ann.med.healthsci res 2014july-aug, vol4, 573-578]

2.8 Prevalence of self medication practices and its associated factor in Urban, Puduchery, India.

Kalaiselvi selvaraj etal (2014):- The cross sectional study was conducted. The prevalence of self medication was found to be 11.9%.Male, aged >40 year involving in moderate level activity of occupation, where found to be significantly associated with higher self medication usage($p<0.05$), fever (31%),head ache(19%), and abdominal pain (16.7%) are most common illness where self medication is being used telling the symptoms to pharmacist(38.1%) was adopted to procure drug by the users. Majority of the self medication users expressed that it is harmless(66.6%) and they are going to use (90%) and advice others also 73.8%) to use self medication drugs. [Perspect Clin Res 2014 Jan- Mar 5(1),32-36]

2.9 A study of self medication pattern among medical students in Shanthiram Medical College, Nandyal.

M.Venkateswarlu etal (2014):- Cross sectional descriptive study was conducted. The data was collected using a pre- tested semi-structured questionnaire. A total of 150 students,93(62%) male and 57(38%) female were included in the study of the medical students surveyed; self medication was reported among 92%. The respondents who used self medication found it to be timesaving in providing relief from minor ailments. The most common condtion for self medications are common (73%), fever (68%) and headache(62%). The students consulted their textbook(45%) and seniors or classmates (39%) for the medication. Antipyretics(78%) analgesics(72%)antihistamine(42%) and antibiotics (38%) were the most common self medication drugs. [journal of evolution of medical and dental science 2014,vol 3, 59issue,13275-13281]

2.10 A Self medication: a current challenge.

Darshana Bennadi(2014):-Self medication is a global phenomenon and potential contributor to human pathogen resistance to antibiotics. The review focused on self medication of allopathic drugs, their use, its safety and reason for using it. It would be safe, if the people who are using it, have sufficient knowledge about its dose, time of intake ,side effect on over dose, but due to lack of information it can cause serious effects such as antibiotic resistance ,skin problem, hypersensitivity and allergy. People have less knowledge regarding risk associated with their self medication. To prevent this problem, which include awareness and education regarding the self medication and strictness regarding pharmaceutical advertising. Dispensing modes in the needs to be improved through proper education, strict regulatory and managerial strategies to make health care easily accessible and cost effective. [Journal of basic and clinical pharmacy 2014,vol 5,issue 1,19-23]

2.11 A systemic review of tele-counselling and its effectiveness in managing depression amongest minority ethinic communities

D S Dorstyn etal(2013). Tele counselling the provision of counselling services by telephone, video, or internet media can assist with disparities in the treatment and management of depression for minority ethnic groups. We therefore reviewed the evidence examining the effectiveness of tele-counselling for this population .This involve a search of electronic data base the grey literature and two reviewed journals. The final sample comprised eight independent studies with a total of 498 adults of Asian, African, Americans or Spanish origin. None of the studies

met the criteria for the highest methodological rating (lev1) and there were five studies at lev 2. Significant short term treatment effect were associated with telephone and internet mediated services. Including moderate to large improvement across measure of depression anxiety ,quality of life and psychological functioning reported. [J Telemed telecare,2013 sep 19(6),338-346]

2.12 A questionnaire to document self -medication history in adult patients visiting emergency department

LucineRoul et, etal (2013):-.They conducted a questionnaire document self medicating behaviours (QSMB) in a tertiary care medical ED. the rate of SMBs measured with QSMBs during a routine period was compared SMBs rate measured with a spontaneous reporting during the reference period .QSMB is divided in to two parts. The first part consist of 20 closed-ended questions exploring all indication and dimensions of self medication. The second part assesses the characteristics of each medication mentioned by the patient in the first 20 questions. The patients interviewed during reference and routine periods did not significantly differ. The routine period patients reported a third more SMBs (89.8% vs 57.6% respectively ; $p<0.0001$) and twice more self medication drugs than reference period patients .SMB rate was significantly different between the survey teams during the reference period(p,0.0001), but not during routine period ($p=0.078$). [Pharmacoepidemiology and drug safety, 2013, 81- 89]

2.13 Statistical study on self medication pattern in Haryana, India

Pankaj Jain etal (2012).:-They conducted a study, include both rural and urban area of Haryana. There are approximately 8000 formally licenced community

pharmacies. A total 66 pharmacies were included in study .A total 2000 questionnaire were distributed, 1403(70.15%) for actual drug use, and 502(25.1%) for messengers were filled and collect, while 95 (4.75%) , i.e.,55. Form. In this study shown that self-medication is widely practiced in the study site. The type of illness/Symptoms of illness reported and category drugs requested for self-medication. The most frequently self-diagnosed illness or symptoms of their illness. Were, GI illness, headache, fever, of these more than 30%, were less than 24 hrs duration. And nearly 80% less than seven day duration of illness. [Indo Global journal of Pharmaceutical Sciences, 2012;2(1):21 -35]

2.14 A study on over the counter drugs in retail pharmacies in indore city

Rahul shoti etal (2011):-Accordingly a sample of 180 pharmacies was selected randomly. A self administered questionnaire was adapted from various similar studies conducted and pre tested on sample of 10 participants. The study consisted of a survey of the use of over the counter medication to prevalence of use of OTC drugs, categories of medication preferred, safety priority of using the drugs, knowledge of use of OTC drugs. The obtained results are the prevalence of use of OTC drugs is high in indore city. NSAIDs were the drug most commonly used OTC. Few people consult pharmacist on drug information. [Der pharmacia letter 2011, 3(3), 133-138]

2.15 Self medication with over the counter drugs:a questionnaire based study.

Mohamed saleem T. K. etal (2011):- A sample of 80 patients selected in community pharmacy. The result is based on the data captured from the 80 patients. The prevalence of self medication was reported as percentage. Of the 92

questionnaires distributed, 80(86.95%) were answered. All the explanation provided 60(75%) were male and rest of them females (25%). About 38(47%) belong to age of 46-55,11(13%) were in 26-35years,16(20%) were in 36-45,9(11%)above 55 and only 6(7%) were in 15-25. Most used medication were analgesics (30%), antipyretic (11.25%), cough and cold medication (16.25%) and antacid (10%). The other commonly used medications were antiemetics, laxctive, dermatological. [Der Pharmacia letter 2011, 3(1), 91-98]

2.16 Non prescribed safe of antibiotics in riyath, saudi arabia: a cross sectional study.

Bin Abdulhak AA,etal(2011):-A total of 327 pharmacies were visited . antibiotics were dispensed without a medical prescription in 244 of 327, of which 231 dispensed without a patient request .simulated case of sore throat and diarrhoea resulted in an antibiotics being dispensed in (90%) of encounters, followed by UTI(70%), acute bronchitis (73%),otitis media (51%) and acute sinusitis (40%). Metronidazole and ciprofloxacin were commonly given for diarrhoea and UTI, respectively , were as amoxicillin/clavulanate was dispensed for other simulated case . none of the pharmacist asked about antibiotic allergy history or provided information about drug interaction. Only 23% asked about pregnancies status when dispensing antibiotic for UTI simulated case. [BMC public HEALTH 2011, 10(1186)/1471-2458-11-538.]

2.17 Risk of self medication practices

Ruiz , Maria(2010). :-Self medications defined as the selection and use of medicine by individuals to treat self recognized or self diagnosed conditions or

symptoms .several benefits have been linked to appropriate self medication among them increased access to medication and relief for the patient, the active role of the patient in his or her own healthcare , better use of physician and pharmacist skills and reduced burden of government due to health expenditure linked to the treatment of minor health conditions . in this short review the author analyse important danger related to self medication practices ,particularly polypharmacy and drug interaction medications abuse or dependence, misdiagnosis and in correct choice of treatment. It also measure that could be adopted in order to solve or improve these issues. [Current drug safety vol 5 nov 2010 page 315 -323]

2.18 In home drug storage and self medication with antimicribialdrugs in Basrah, Iraq.

Abdul-Mohsin Jassim:-A descriptive study involving a questionnaire survey to determine the extent of drug storage and self medication. The majority of household (94%) stored drugs at home. A total of 4279of different types of drug preparation were encountered, the mean being 14.26 products/household. The results also showed that a minority of these drugs (31%) were rationally prescribed. Hence only 31%of the total drugs were for current use, while 45% were leftovers and 23% of the drugs were kept for future use. A large proportion of the stored drugs (66%) obtained from private pharmacies. Only 42% of all the drugs were stored appropriately. Antibiotics, as a group was the most common drug stored and used at home (26%). The results indicated that the level of education has influence over dose compliance, storage of expired drugs and drugs exchange. A majority of families (78%) admitted to practicing self medication. Most common reasons for self medication with antimicrobial drugs were associated with influenza, upper

respiratory tract infections, diarrhoea, tonsillitis. [Oman Medical journal 2010,vol 25,issue2, 79-87]

2.19 The abuse of prescription and OTC drugs in teens

Levine, Deborah A (2007):-Prescription and over the counter cough and cold medication abuse rapidly becoming a national health concern for adolescents. Data from survey and poison control centers record demonstrate an increased non medical use of prescription and over the counter cough and cold preparation. Particularly that contains dexomethorphan. The non medical use of prescription medications may result in serious clinical effects with potential life treating complications dependence and withdrawal syndromes. Dexomethorphan cause alterations in mental status that may contributes to judgment impairment leading to injury or fatality . Co ingestion of other substance found in OTC medication may also cause significant morbidity.

The recent trend of prescription and dexomethorphan contain OTC medication abuse in adolescents is alarming. Improve awareness for these readily available seeming being yet highly dangerous medication is essential. Prevention and early education on substance abuse in young teens are critical. [Current opinion in paediatrics , vol 13 june 2007 issue 3 page 270-274.]

3. AIM AND OBJECTIVES

3.1. AIM

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

3.2. OBJECTIVES

To determine the utilisation pattern of commonly used Over The Counter drugs

- To prepare Patient information leaflets (PIL) and posters on OTC medicine
- To provide tele-counselling for subjects using OTC medication.
- To assess the outcomes of pharmacist interventions.
- Conduct direct counselling in palliative care patient.

4. METHODOLOGY

A Prospective experimental study was carried out for a period of six months in the selected community pharmacy of Malappuram district, Kerala. Initially we have collected the details regarding OTC dispensing that is occurring in 8 community pharmacy in Malappuram 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.

4.1 Study Setting

The study was carried out in selected community pharmacy of Malappuram district of Kerala.

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. NILAMBUR
2. TIRUR
3. RAMANATTUKARA
4. MANJERI

Test pharmacy

Under pharmacy B, we studied the following community pharmacies:

1. PARAPPANANGADI
2. PERINTHALMANNA
3. KOTTAKKAL
4. PONNANI

4.2 Study Design

A prospective interventional study was conducted with the aim to study the effectiveness of pharmacist involvement on self-medication in community setting.

4.3 Study Period

The study was carried out for a period of six months commencing from August 2018 to January 2019.

4.5. Ethical clearance

This study was approved by the institutional ethical committee of Padmavathi College Of Pharmacy And Research Institute approved for the proposal of dissertation as per letter reference PCP/ADMN/EC/171/2018.

4.6 Study criteria

4.6.1 Inclusion criteria

- Subjects ≥ 18 years

4.6.2 Exclusion criteria

- Subjects < 18 years
- Subject who are not co-operative
- Subject having psychiatric comorbidity
- Subject who are admitted in hospital

4.7 study material

4.7.1 Questionnaire form was prepared based on the data required for evaluation which included patient demographic details ,education details ,details regarding previous consultation, patient condition, drug use, details regarding household medicine etc.

4.7.2 Leaflet for providing non pharmacological treatment.

4.8 Source of data

1. Questionnaire (Annexure:IV)

2. Personal interview with the patient(telephone)

3. Personal interview with pharmacist

4.9 Study population

Study was conducted in both selected urban and rural areas of Malappuram district during the time period from August 2018 to January 2019. In the 2011 census, the district had a population of 4,112,920. Malappuram has a sex ratio of 1096 women to 1000 men, and its literacy rate is 93.55 percent. Based on the

inclusion and exclusion criteria of the protocol reviewed by the iec. 200 patients was included and enrolled for the study.

4.10 Design of data collection form

A specially designed data collection form (Annexure:-V&VI) was used for collecting the patients data. It consist of the details regarding patients demography, education qualification, drug use, reason for drug use, details of household drugs etc.

4.11 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.

4.12 Data Analysis

Data collected from the study was tabulated in Microsoft Excel 2010 and were keyed into the Statistical Package for Social Science (SPSS Inc. Chicago, II, USA) computer software version 20 for windows and analysed by appropriate statistical methods. Statistical analysis was both descriptive at 95% confidence level. Continuous variables were analysed using the mean, percentage and standard deviation. Chi Square test and paired t test were used for statistical analysis of follow up of clinical data variables. A two- tailored probability value of <0.05 was considered to be statistically significant.

5.0 RESULTS

5.1 AGE WISE DSITRIBUTION OF RESPONDENTS

Table :1

		SEX		Total
		MALE	FEMALE	
AGE CATEGORY	YOUNG ADULTHOOD	128	37	165
	MIDDLE AADULTHOOD	28	7	35
Total		156	44	200

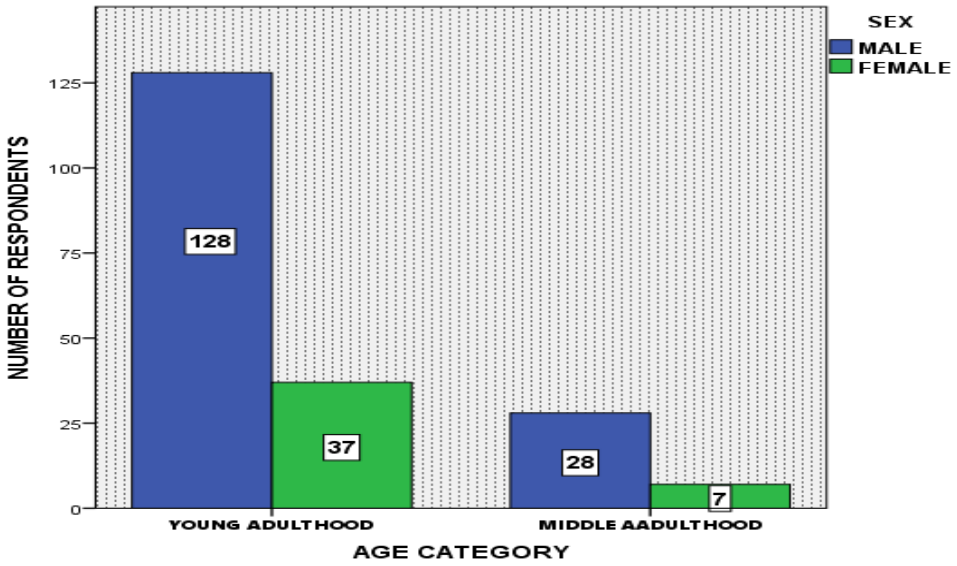

***Fig 1: Age wise distribution of respondents**

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

5.2 EDUCATION WISE DISTRIBUTION OF RESPONDENTS

Table : 2

EDUCATION		
		Frequency
Education	BELOW SSLC	36
	SSLC	60
	PLUS TWO	49
	ABOVE PLUS TWO	55
	Total	200

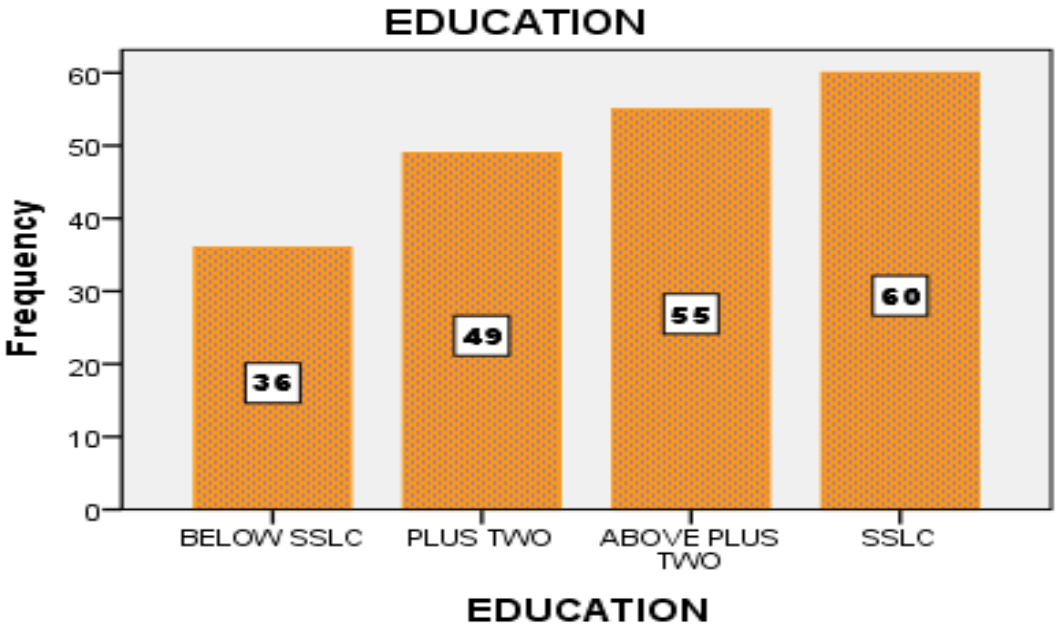

Fig 2: education wise distribution of respondents

In 200 total respondents, 36 (18%) were BELOW SSLC ,49(24.5%)were PLUS TWO. The education qualification of 55(27.5%) respondents were ABOVE PLUSTWO, and remaining 60(30%) were SSLC.

5.3 INDICATION FOR SELF MEDICATION

Table : 3

CONDITION					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ALLERGY	10	5.0	5.0	5.0
	COLD	6	3.0	3.0	8.0
	CONJUCTIVITIS	7	3.5	3.5	11.5
	CONSTIPATION	5	2.5	2.5	14.0
	COUGH	13	6.5	6.5	20.5
	DANDRUFF	2	1.0	1.0	21.5
	DIARRHEA	7	3.5	3.5	25.0
	EYE IRRITATION	1	.5	.5	25.5
	FEVER	31	15.5	15.5	41.0
	GASTRIC PROBLEM	23	11.5	11.5	52.5
	MENSTRUAL IRREGULAR	1	.5	.5	53.0
	MIGRAINE	3	1.5	1.5	54.5
	MOUTH ULCER	1	.5	.5	55.0
	PAIN	62	31.0	31.0	86.0
	PIGMENTATION	1	.5	.5	86.5
	THROAT PAIN	10	5.0	5.0	91.5
	VERTIGO	1	.5	.5	92.0
	VOMITING	7	3.5	3.5	95.5
	WOUND	9	4.5	4.5	100.0
	Total	200	100.0	100.0	

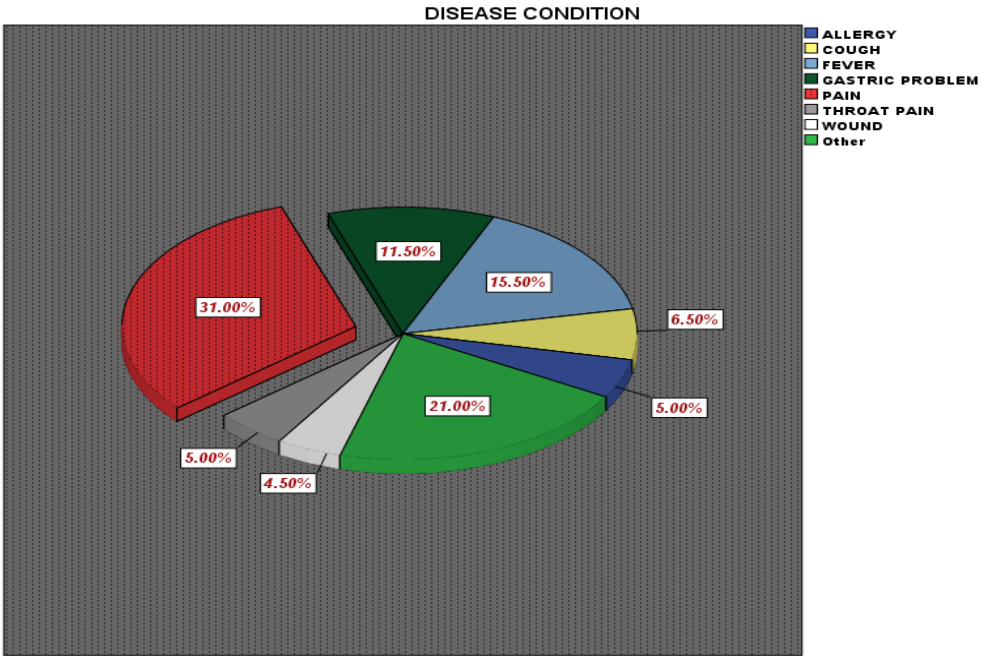

Fig 3: indication for self medication

The study found that the condition prompting self -medication were pain 31% , fever 15.5% , gastric problem 11.50% , cough 6.50%, throat pain 5.0% ,allergy 5.0%, and wound 4.5 %. Remaining 21%was due to other condition like conjunctivitis, menstrual irregularities, dandruff etc.

5.4 DRUGS USED FOR THE SELF TREATMENT

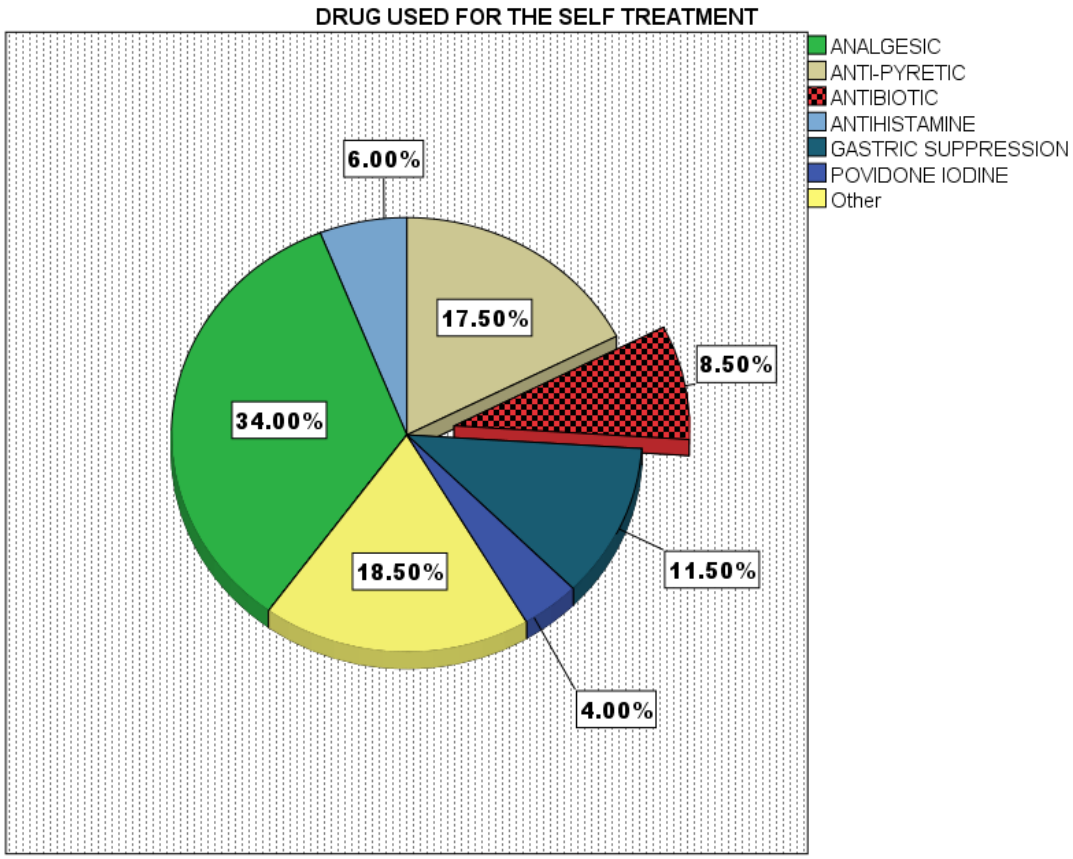

Fig 4:drugs used for the self treatment

The drug used for self medication shows, that the most common drug was Analgesics (34%), then Antipyretic (17.5%), Gastric suppression(11.5%), Antibiotics(8.5%), Antihistamines (6%), Povidone iodine (4%) and remaining for other reason such as conjunctivitis and dermatological products etc.

5.5 REASON FOR SELF TREATMENT

Table : 4

		Frequency
REASON	LACK OF MONEY	38
	LACK OF TIME	113
	LACK OF TRUST	27
	OTHERS	22
	Total	200

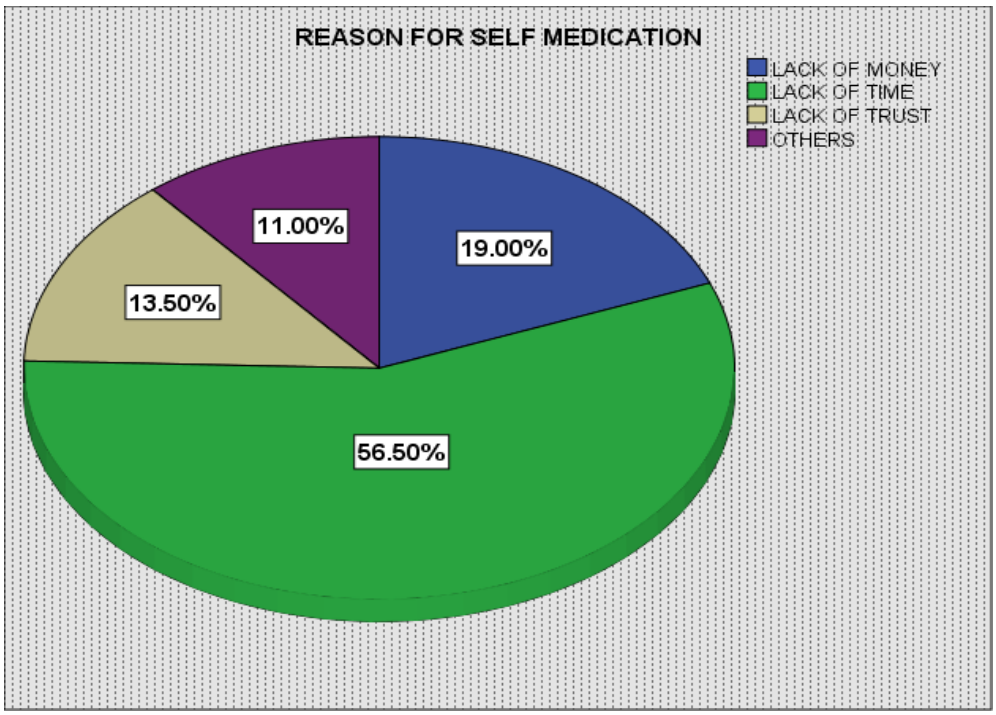

Fig 5: Reason for self medication

56.5% of the total population took self medicaments due to lack of time, 19% was due to lack of money, 13.5% was due to lack of trust in doctor treatment, remaining 11% was due to other reason.

5.6 KNOWLEDGE ABOUT THE DRUGS VS SPOT COUNSELLING

Table : 5

AWARE ABOUT THE DRUGS vs INFORMATION (PHARMACIST) Cross tabulation				
		INFORMATION (PHARMACIST)		Total
		YES	NO	
KNOW ABOUT THE DRUGS	YES	13	21	34
	NO	6	160	166
Total		19	181	200

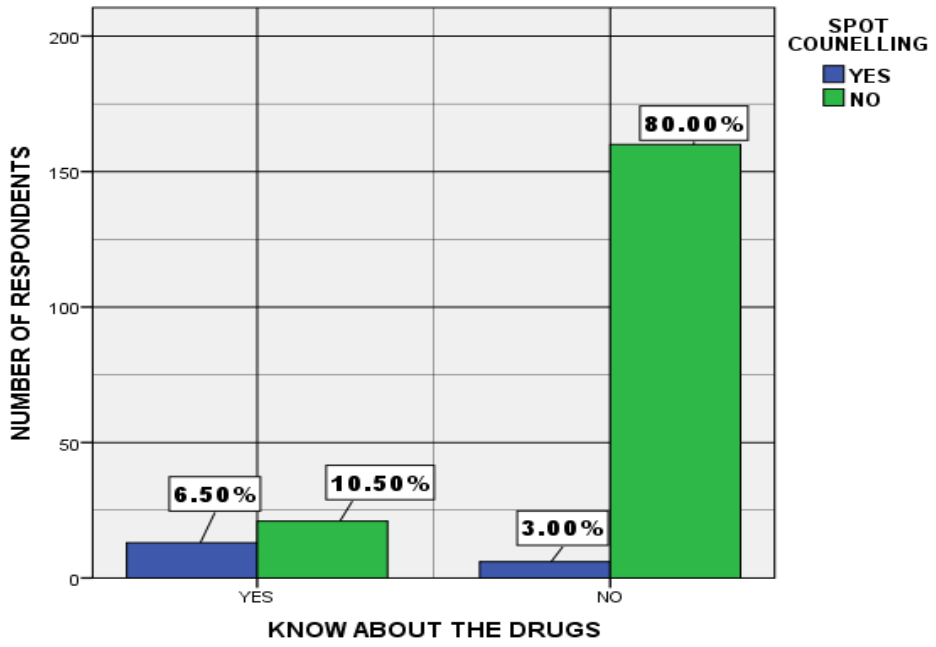

Fig 6: Aware about the drug and spot counselling

From our study 200 subjects, 17% of people known about the drug, out of this 6.5 % of the people got spot counselling and 10.5% of people didn't get. 83% of people were unknown about the drugs, out of these 3% of people got spot counselling, 80%of people didn't get spot counselling

5.7 FREQUANCY OF SELF MEDICATION

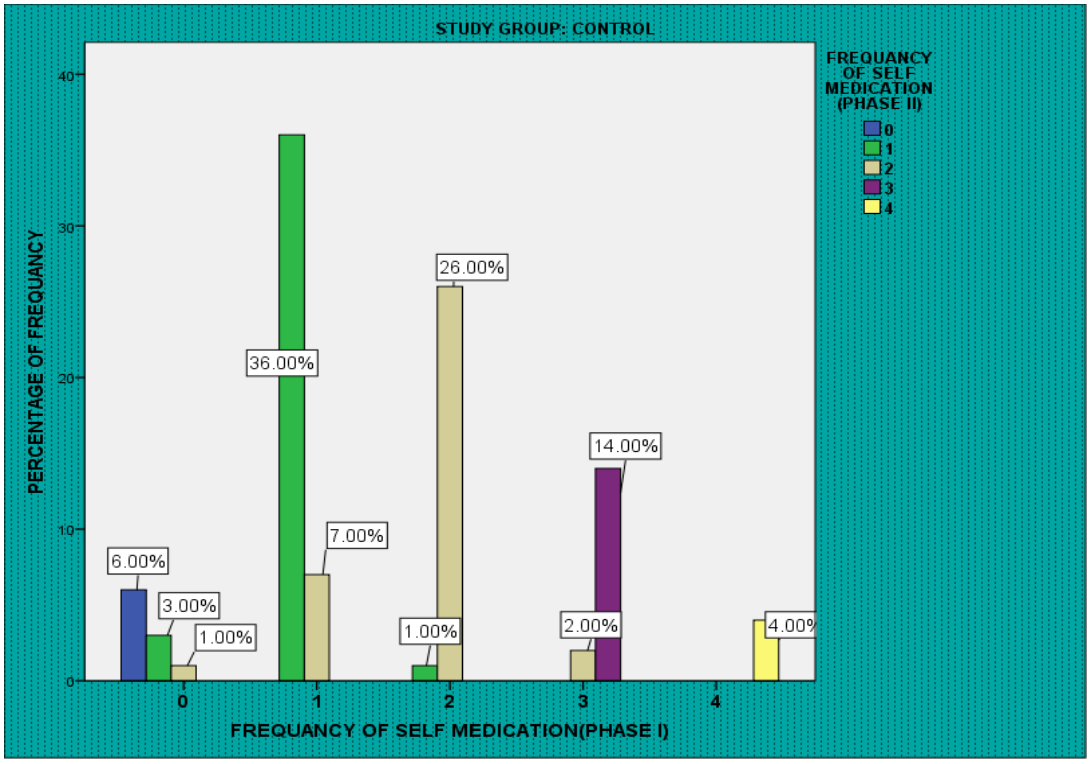

Fig 7: frequency of self medication in control group

4% of control population consume self-medicament 4 times in both phases. In control group 3 times self-medicaments were consumed by 14% of respondents in phase 1 and 12% in phase 2. 2 times self-medicaments were consumed by 27% of respondents in phase 1 and 36% in phase 2. 1 time self-medicaments were consumed by 43% of respondents in phase 1 and 40% in phase 2.

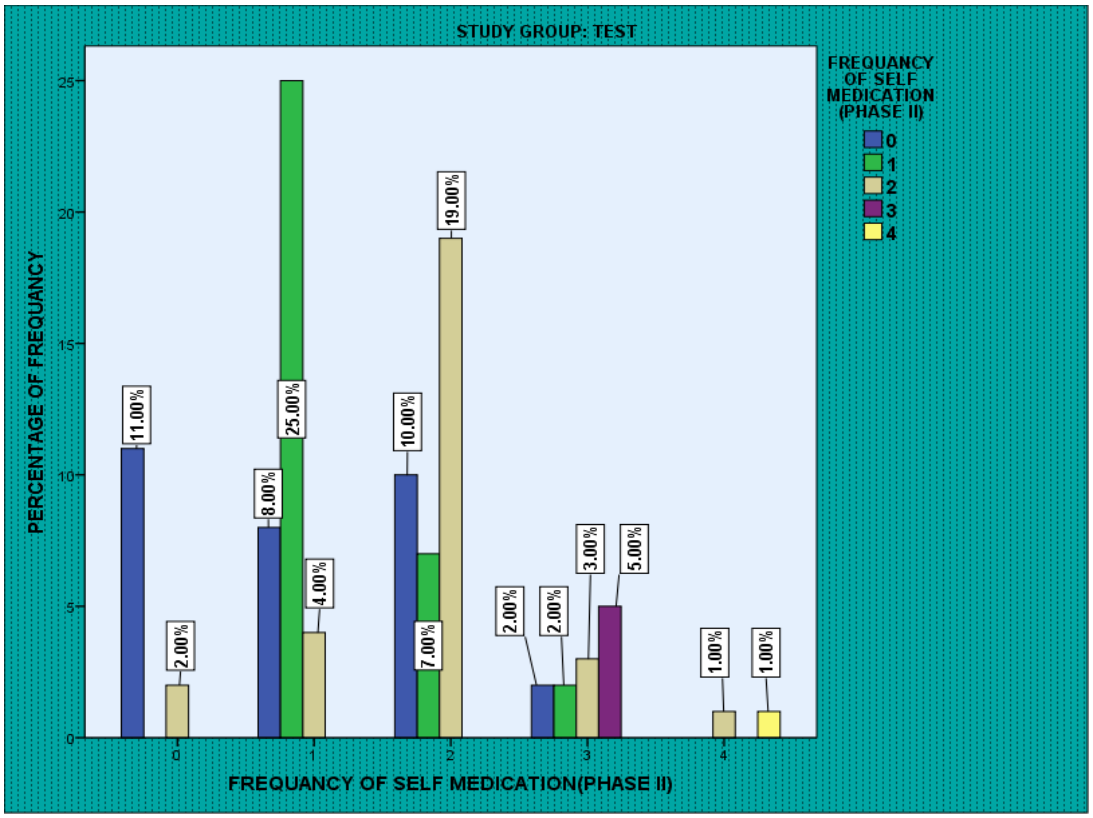

Fig 8: frequency of self-medication in test group

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 37% of respondents in phase 1 and 34% in phase 2. 13% Test population did not consume self-medicaments in phase 1 and it will increased to 31% in phase 2.

5.8 TREATMENT OUTCOMES

5.8.1PHASE 1

Table : 6

PHASE 1		Frequency
IN ONE MONTH	NO DRUG TAKEN	1
	EFFECTIVE	112
	NOT EFFECTIVE	18
	SOME	69
	Total	200

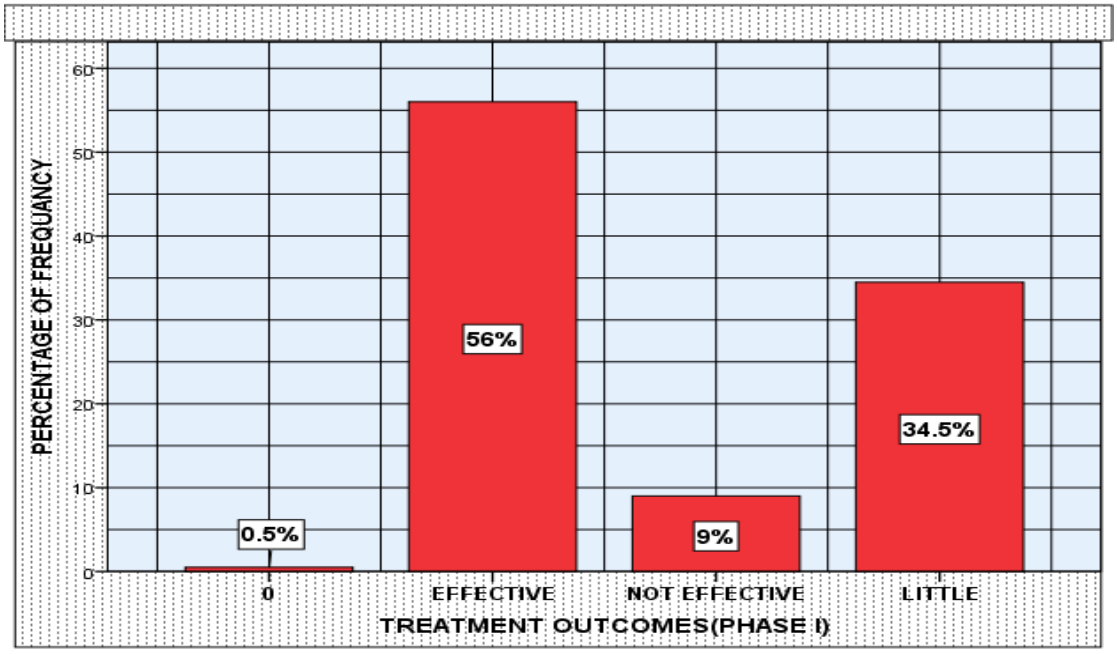

Fig 9: Treatment out comes during one month in phase 1

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.

5.8.2 PHASE II

Table : 7

TREATMENT OUTCOME (PHASE 1) vs STUDY GROUP Cross tabulation				
PHASE 2		STUDY GROUP		Total
		CONTROL	TEST	
TREATMENT OUTCOMES (PHASE 2)	NO DRUG TAKEN	6	30	36
	EFFECTIVE	58	61	119
	NOT EFFECTIVE	7	6	13
	SOME	29	3	32
Total		100	100	200

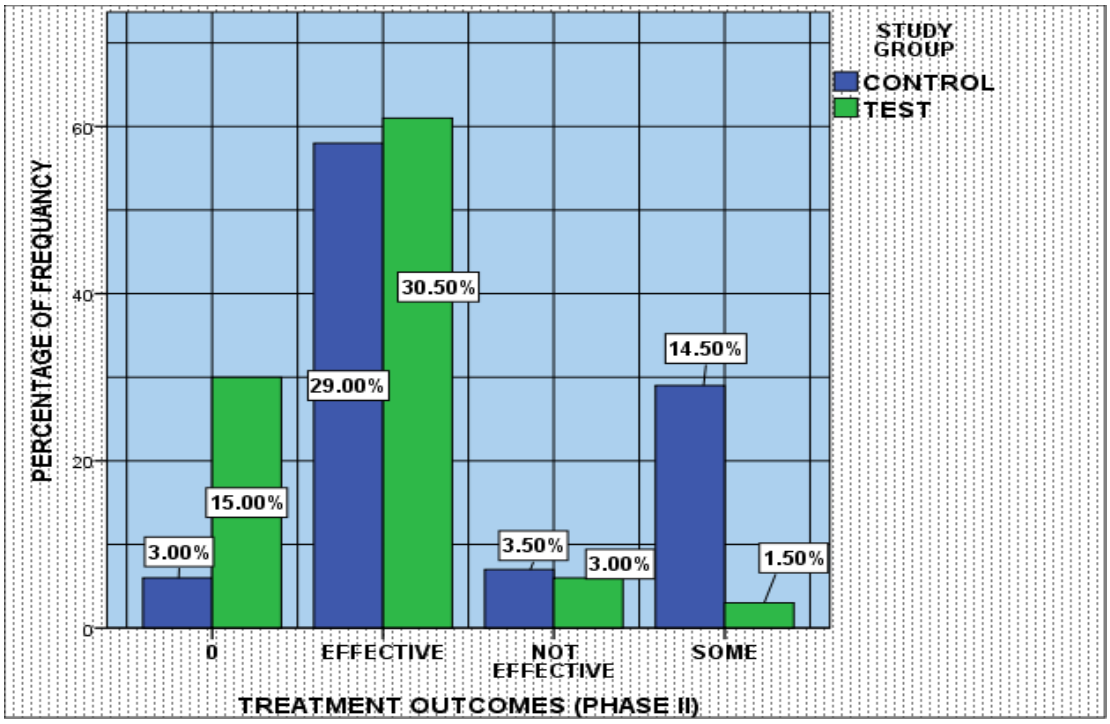

Fig 10: treatment out comes during one month in phase 1

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.

5.9 SIDE EFFECTS

5.9.1 CONTROL GROUP

Table : 8

		SIDE EFFECTS (POST EXPOSURE)			Total
		NO DRUG	YES	NO	
SIDE EFFECTS	YES	0	25	2	27
	NO	6	0	66	72
Total		6	25	68	99

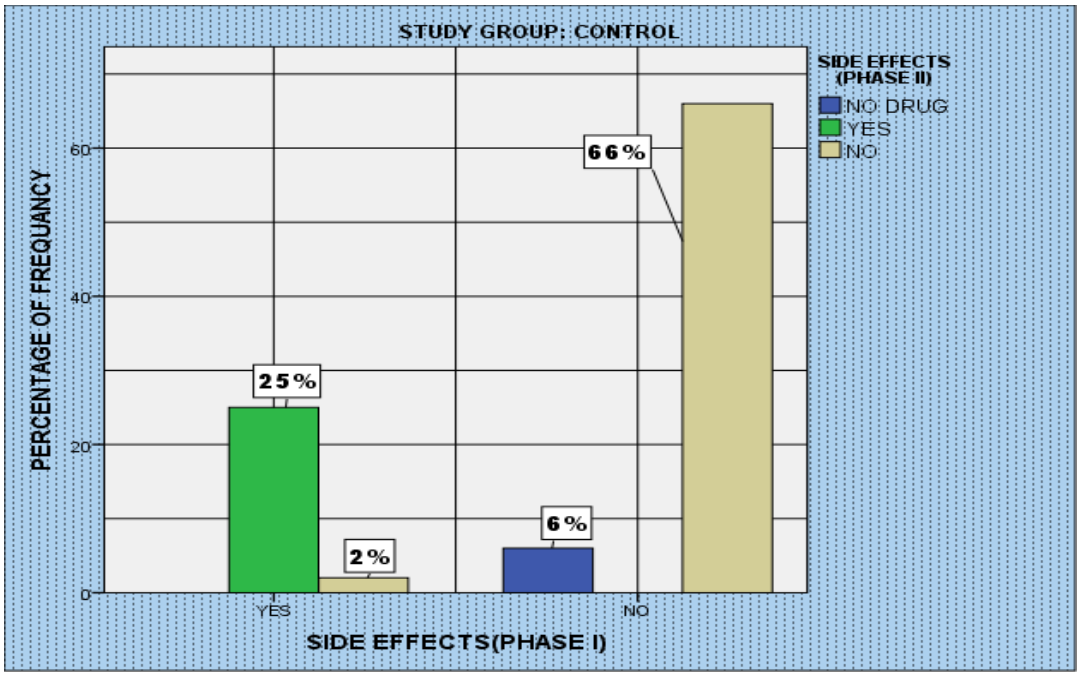

Fig 11: side effect of control population in both phases

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.

5.9.2 TEST PHASE

Table :9

		SIDE EFFECTS (POST EXPOSURE)			Total
		NO DRUG	YES	NO	
SIDE EFFECTS	YES	5	4	9	18
	NO	25	0	58	83
Total		30	4	67	101

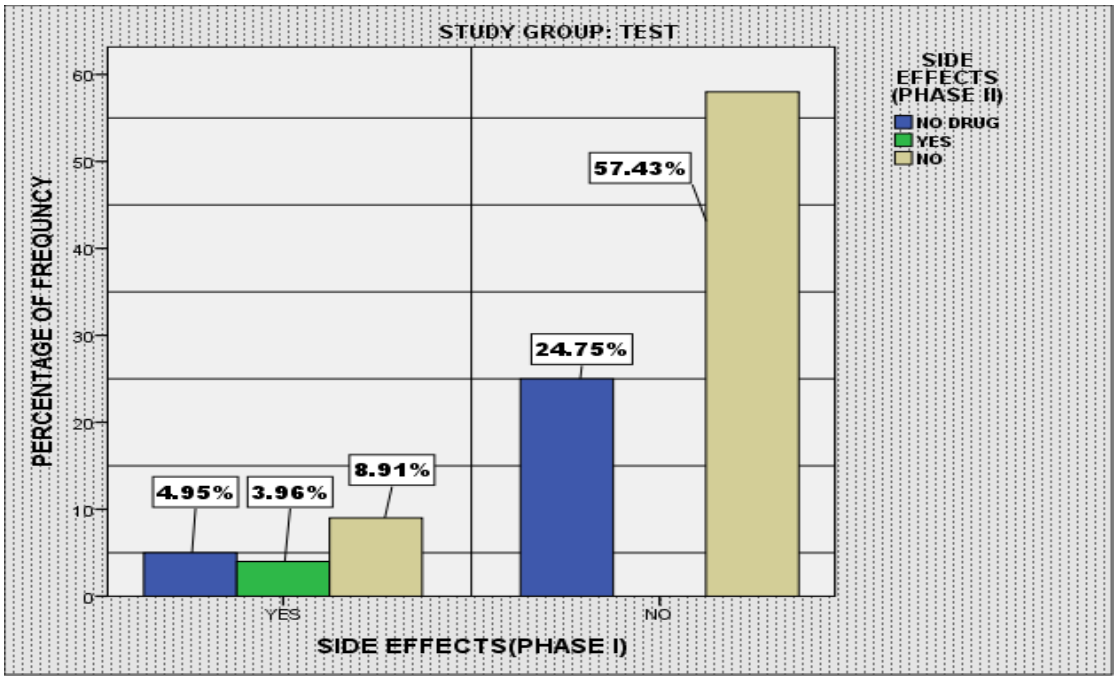

Fig 11a: side effect of control population in both phases

Around 5% of respondents have side effect in phase 1 and they did not took drug in phase 2. 24.75% of the respondents did not have side effect in both phase. 3.96% of respondents have side effect during both phase. 8.91% of respondents have side effect in phase 1, and no side effects was reported in phase 2. 57% of respondents free from side effect during both phase.

5.10 AWARENESS OF RESPONDENTS ABOUT SIDE EFFECT OF THE DRUGS

Table : 10

STUDY GROUP			AWARE ABOUT THE DRUG (POST EXPOSURE)			Total
			YES	NO	3	
CONTROL	AWARE ABOUT THE DRUG	YES	6	0	0	6
		NO	0	69	0	69
		LITTLE	0	0	25	25
	Total		6	69	25	100
TEST	AWARE ABOUT THE DRUG	0	1	0	0	1
		YES	3	0	0	3
		NO	68	1	4	73
		LITTLE	23	0	0	23
	Total		95	1	4	100

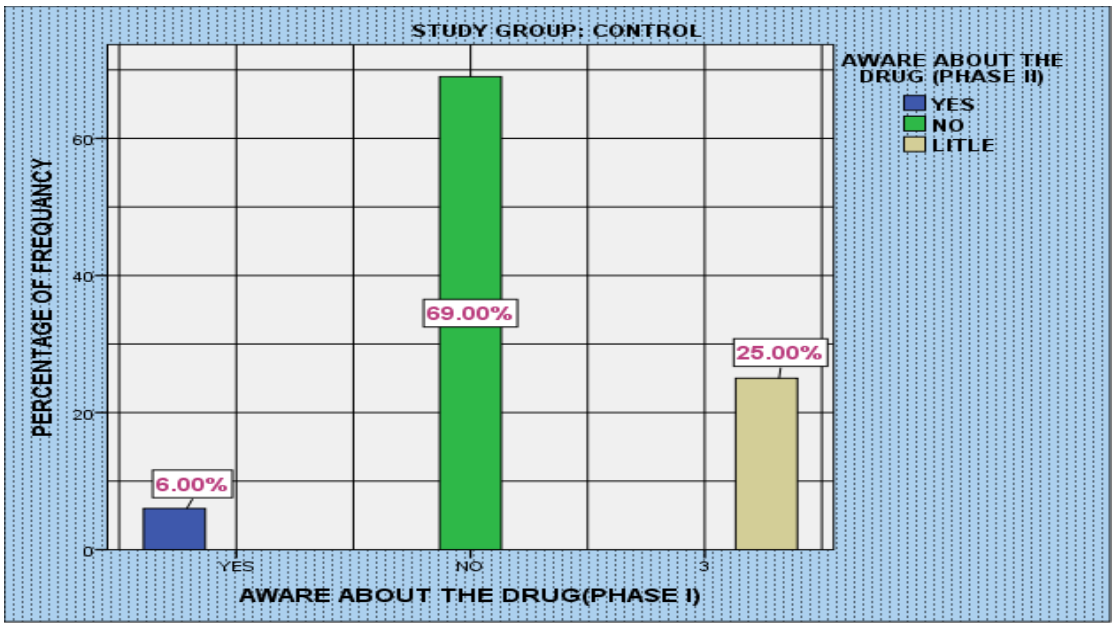

Fig 12 : Aware about the drugs in control group

6% of control group were aware about the self medicament in both phase. 69% 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.

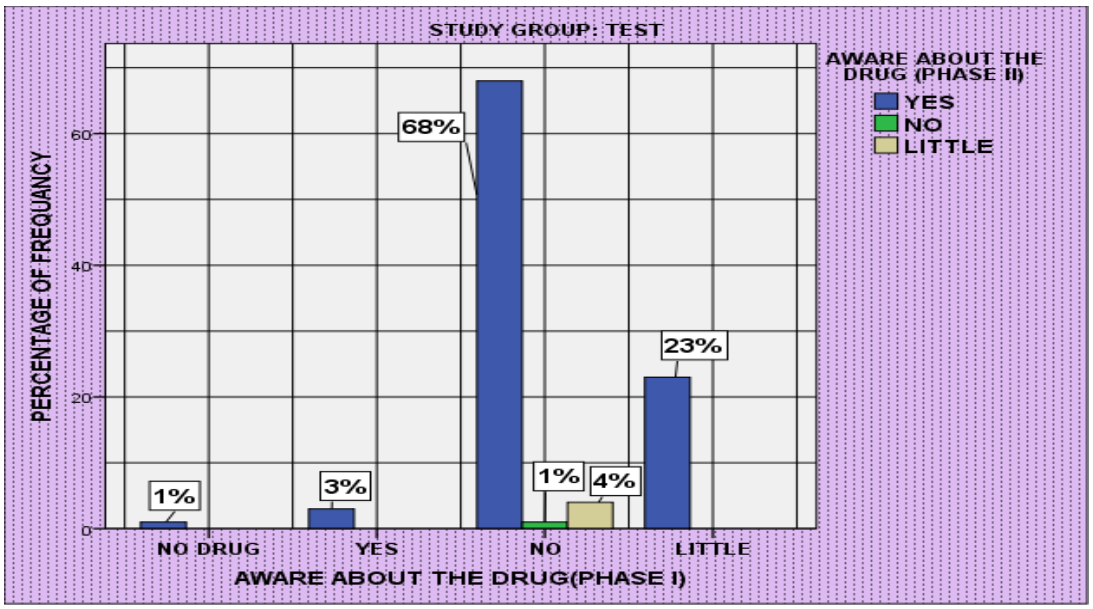

Fig 13 : Aware about the drugs in test group

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 1and become aware phase2. 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.

5.11 AWARENESS ABOUT DIC

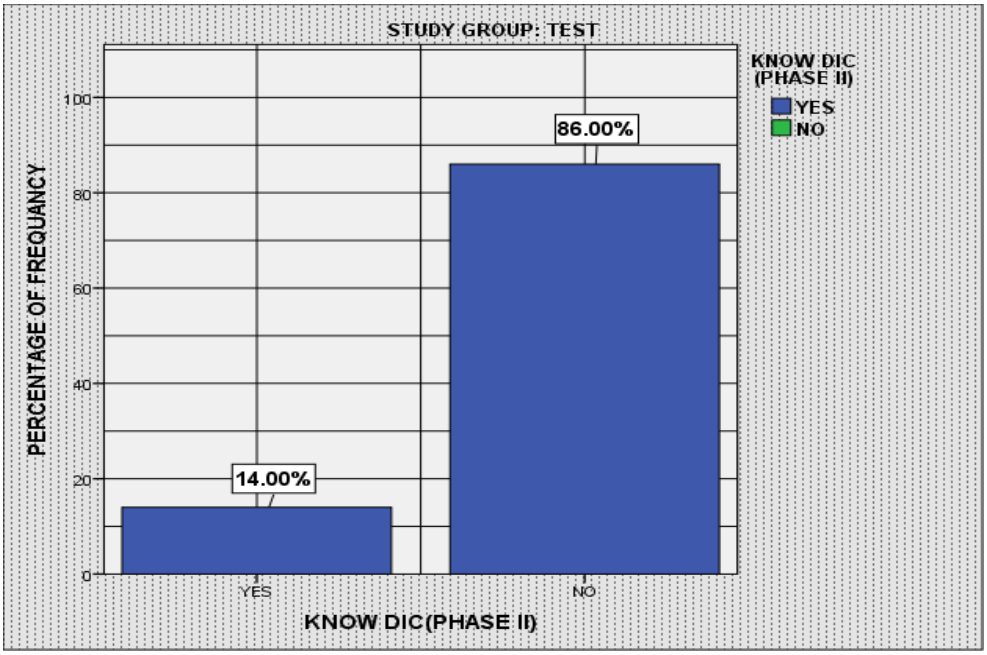

Fig 14: Awareness of test group about DIC

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.

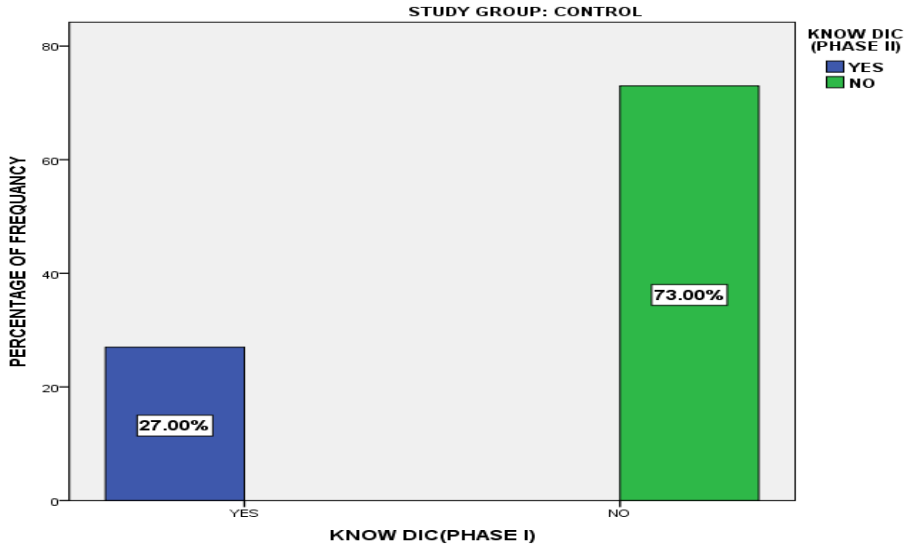

Fig 15: Awareness of control group about DIC

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

5.12. BEST TREATMENT OPTION

Table : 11

PHASE 2		STUDY GROUP		Total
		CONTROL	TEST	
BEST TREATMENT	SELF MEDICATION	60	33	93
	DOCTOR TREATMENT	25	44	69
	BOTH	15	23	38
Total		100	100	200

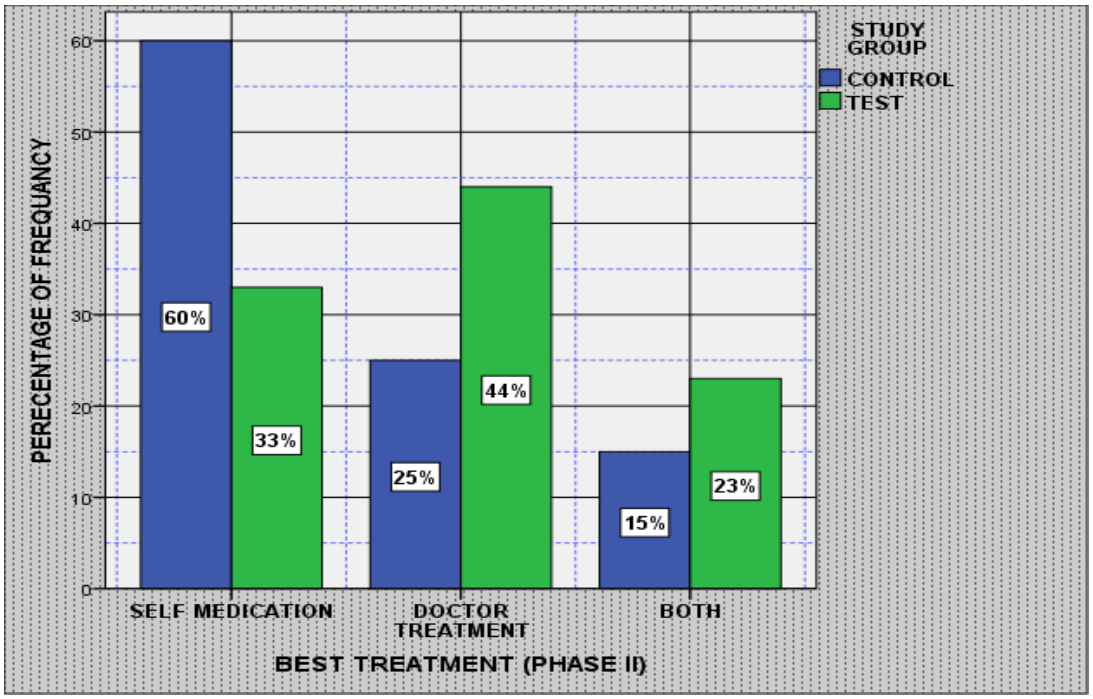

Fig 16 : Best treatment option in phase 2 in both groups

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%).

5.13. IMPORTENCE OF PATIENT COUNSELLING

Table : 12

PHASE 2		STUDY GROUP		Total
		CONTROL	TEST	
PATIENT COUNSELLUNG IMPORTANCE	NECESSARY	61	70	131
	NEED	37	30	67
	NOT NEED	2	0	2
Total		100	100	200

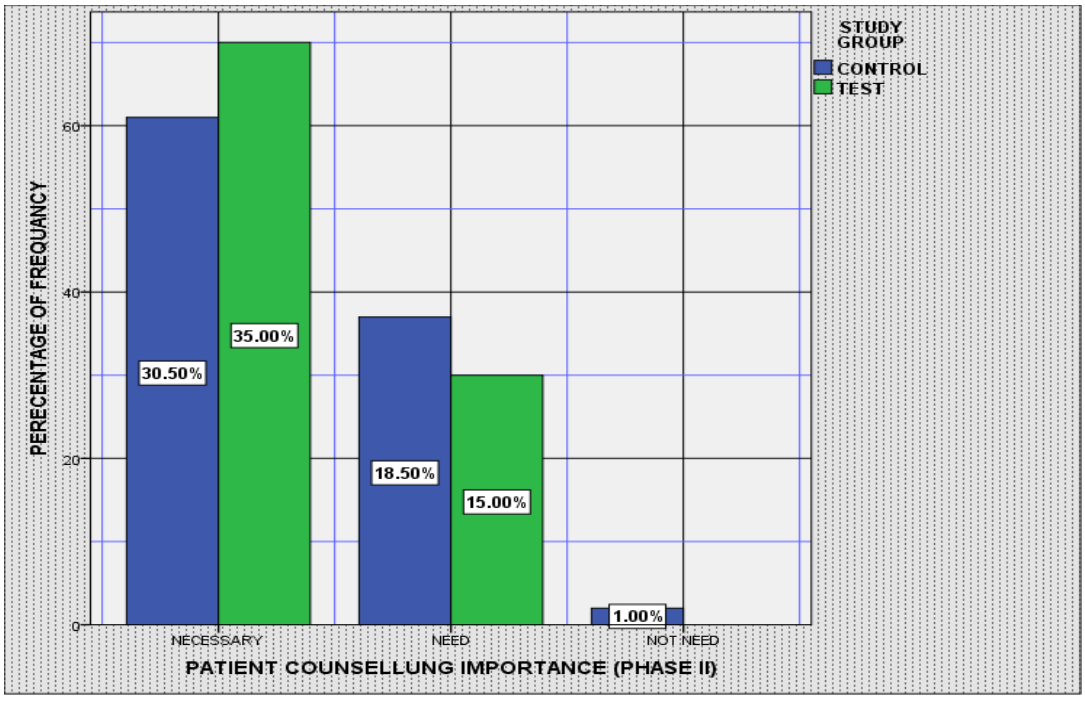

Fig 17: Importance of patient counselling

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 group said that patient counselling is needed. 1% of control group said that patent counselling is not need.

5.14. DRUG INFORMATION SOURCE

Table : 13

PHASE 2		STUDY GROUP		Total
		CONTROL	TEST	
DRUG ENQUIRY	PHARMACIST	84	84	168
	DOCTOR	3	2	5
	OTHERS	13	14	27

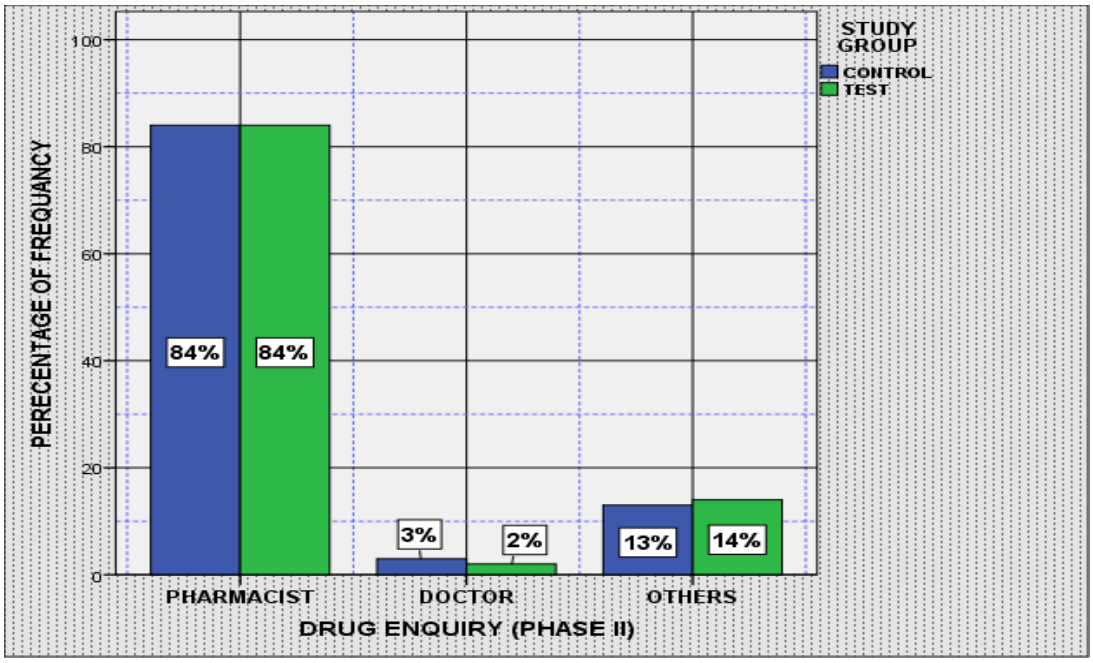

Fig 18: Drug information source

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 (84%) .In test2% and control 3% of respondents said that the doctor is the best. Then others such as relatives friends will be 13% in control and 14%of test group.

DRUG STORAGE IN HOME

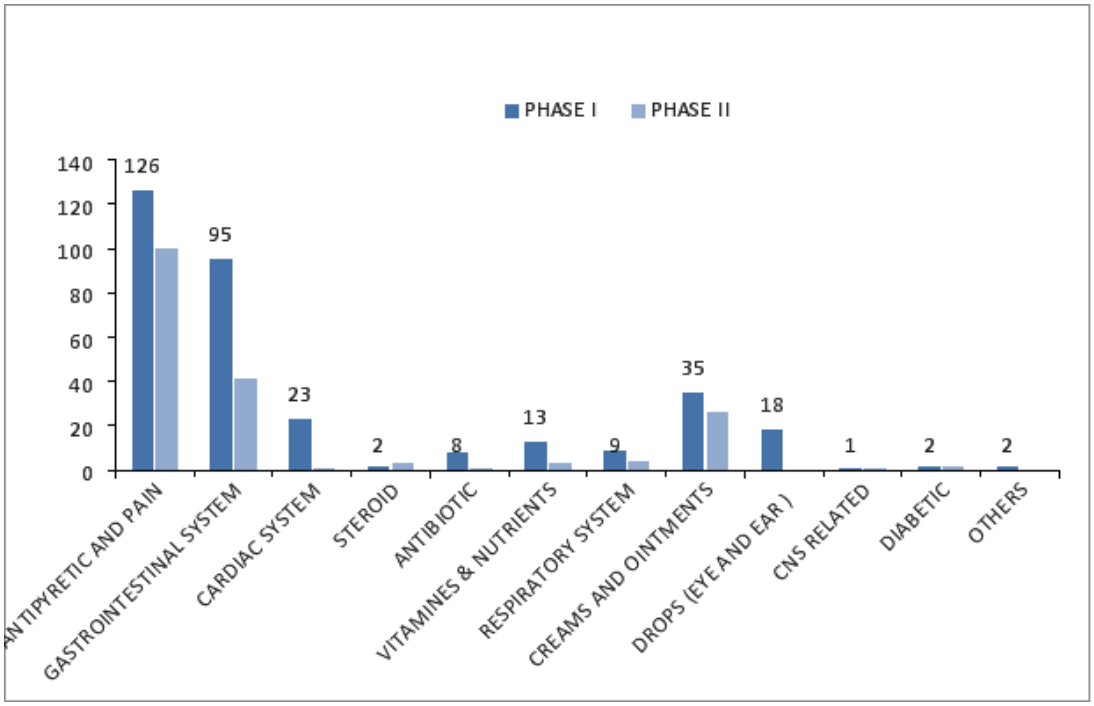

Fig 19: Drug storage in home

Among the total storage of drug in phase one study 126 respondents have antipyretic and pains drugs, 75 have gastrointestinal system, 23have cardiac system, 2 have steroids, 8 have antibiotics, 13 have vitamin supplements, 9 have respiratory system, 25 have creams and ointments, 18 have eye and ear drops, 1 have CNS related product, 2 have diabetics and 2 others drugs. In phase 2 storage of drugs was found to be decreased.

6.0 DISCUSSION

The study was designed to evaluate the effectiveness of tele-counselling and leaflets in Malappuram 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 Dr.Muhammed saleem TK et al[70] 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 78% of the total respondents were males, out of which 82% were young adults and the remaining 18% were middle age group. Rest of the 22% of total population were females, out of which 84% were young adults and 16% were middle age group. The result of age wise distribution of our project opposes the result of study of Dr.Muhammed saleem TK[70] where, 47% of middle group were under OTC purchasing. As per our study young adulthood are having more tendency for OTC purchasing. But during tele-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 al[68] 2012, on the aspect that education level of the respondents are important, while considering the self medication pattern. Our study found that, out of 200 respondents with secondary school qualification 30% are more under self medication. This result is very much similar to the study conducted by Pankaj Jain et al where out of 1403 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 Dr.Muhammed Saleem TK et al[70]. Both studies reported that the main reason for self medication was the lack of time. Asper our study, 56.7% 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 tele-counselling are the only effective option

Common indication for self medication in our study were consistent with the result of study carried out by Dr. Mohammed Salim T K etal[70]. As per our study it was found that the condition prompting self-medication is more due to pain(30%). And previous study ANalso 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 etal[61], 2015 where again most of respondents were under self-medication due to pain. In the pain category include head ache, abdominal pain, tooth ache, 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 56% of respondents were found to be effective to self medication while in phase II, 59.5% of respondents was found to be effective.

- In phase 1, 9% 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 6.5%.

- In phase 1, 34.5% of respondents reported that they were moderately effective to self medication and in phase II it was reduced to 16%.

- In phase 1, 0.5% 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 etal[68], 2012. The study reported that the treatment outcome was found to be effective in 62.7% respondents, 17.1% of respondents were found to be less effective to self-medication and about 10.9% were found to be not effective to self-medication. Almost similar results were found in our study too. 56% respondents were having effective outcome from self-medication, 34.5% respondents shows less effectiveness to self-medication and the remaining 5% were not under self-medication. Both study stated that the treatment outcome was found to be effective for the respondents. In phase 2 study, 3% of control and 15% of test were found to be not consuming self-medicament. 28.5% of control and 31% of test was effective. 3.5% of control and 3% of test was not effective. 14.50 of control and 1.5% of test are found to be moderately effective. Our study was significant with respect to the treatment out comes (p value(test=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 decreased 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 Malappuram 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 tele-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=000 & control=0.083))

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

7.0 CONCLUSION

The prevalence of self-medication with the over the counter drug in Perinthalmanna is high. Self-medication has been a modern trend for more than 10 year. 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 tele 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 tele 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 Malappuram 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 decrease. 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.

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ANNEXURE III : LEAFLET

ANNEXURE II

QUESTIONNAIREFORM(PHASEI)

PATHMAVATHI COLLEGE OF PHARMACY

Department of Pharmacy Practice

Effectiveness of Pharmacist Intervention On Self-Medication: Perspective From A Community Based Prospective Study

QUESTIONNAIRE FORM

പേര്: വിലാസം:
സ്ത്രീ/പു:
വയസ്സ്: ഫോൺ നമ്പർ:

1. ഈ pharmacy തിരഞ്ഞെടുക്കുവാനുള്ള കാരണം ?

   അടുത്തുള്ളവ ☐ കുടുംബം ☐
   പരിജയസമ്പന്നരായ ഫാർമസിസ്റ്റ് ☐ മറ്റുള്ളവ ☐

2. താങ്കളുടെ അസുഖം എന്തായിരുന്നു?

3. ഏതു മരുന്നാണ് താങ്കൾ വാങ്ങിയത്?

4. താങ്കൾ വാങ്ങിയ മരുന്നിനെ കുറിച്ച് അറിയാമോ? ഫാർമസിസ്റ്റ് പറഞ്ഞു തന്നിട്ടുണ്ടോ?

5. ഈ മരുന്നല്ലാതെ വേറെ എന്തെങ്കിലും മരുന്നുകൾ താങ്കൾ കഴിക്കാറുണ്ടോ?

6. അവ ഉപയോഗിക്കാനുള്ള സാഹചര്യം എന്താണ് ?

7. കുറിപ്പില്ലാതെ താങ്കൾ എത്ര തവണ മരുന്നുകൾ എടുത്തിരുന്നു?

   ☐ തവണ

8. ഈ മരുന്നുകൾ എടുക്കുമ്പോൾ താങ്കളുടെ അസുഖം കുറയാറുണ്ടോ?

   അതെ ☐ ഇല്ല ☐ കുറച്ച് ☐

9. ഈ മരുന്നുകൾ കഴിക്കുമ്പോൾ എന്തെങ്കിലും ബുദ്ധിമുട്ടുകൾ അനുഭവിചിരുന്നോ?

   അതെ ☐ ഇല്ല ☐

10. കുറിപ്പില്ലാതെ വാങ്ങുന്ന മരുന്നുകളുടെ പാർശ്വഫലങ്ങളെ കുറിച്ച് നിങ്ങൾ ബോധവാനാണോ?

    അതെ ☐ ഇല്ല ☐ കുറച്ച് ☐

11. ഒരു മാസത്തിൽ എത്ര തവണ വൈദ്യസഹായം എടുത്തു?

12. വീട്ടിൽ എന്തെല്ലാം മരുന്നുകൾ ഉണ്ട് (മരുന്ന് പെട്ടിയിൽ)? അവ എന്തിനൊക്കെ ആണ് ഉപയോഗിക്കാറുള്ളത്?

13. Drug Information Centre (DIC) എന്ന സേവനത്തെക്കുറിച്ച് കേട്ടിട്ടുണ്ടോ?

    അതെ ☐ ഇല്ല ☐

14. സേവനത്തെ ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ടോ?

15. ഫോൺ മുഖേന ലഭിച്ച വിവരങ്ങളിൽ നിങ്ങൾ സംതൃപ്തരാണോ?

ANNEXURE III : QUESTIONNAIRE FORM (PHASE II)

PATHMAVATHI COLLEGE OF PHARMACY

Department of Pharmacy Practice

Effectiveness of Pharmacist Intervention On Self-Medication: Perspective From A Community Based Prospective Study

QUESTIONNAIRE FORM

NAME:

1. ഏതു ചികിൽത്സ രീതിയാണ് നല്ലത്

☐ Self medication ☐ doctor treatment ☐ both ☐ non of the above

2. Patient counselling അവിശ്യകത ?

☐ അത്യാവിശ്യം ☐ ആവിശ്യം ☐ അനാവിശ്യം

3. മരുന്ന് സംബന്തമായ സംശയങ്ങൾക്ക് നിങ്ങൾ ആശ്രയിക്കുന്നത് ?

☐ ഫാർമസിസ്റ്റ് ☐ ഡോക്ടർ ☐ നേഴ്സ് ☐ മറ്റുള്ളവർ

4. മരുന്ന് വാങ്ങിക്കുമ്പോൾ ഫാർമസിസ്ടിനോട് ചോദിച്ചു മനസ്സിലാക്കാറുന്ടോ?

അതെ ☐ ഇല്ല ☐

5. എന്തെങ്കിലും മരുന്നുകൾ താങ്കൾ കഴിക്കാറുണ്ടോ?

6. അവ ഉപയോഗിക്കാനുള്ള സാഹചര്യം എന്താണ് ?

7. കുറിപ്പില്ലാതെ താങ്കൾ എത്ര തവണ മരുന്നുകൾ എടുത്തിരുന്നു? ഒരു മാസത്തിൽ

☐ തവണ

8. ഈ മരുന്നുകൾ എടുക്കുമ്പോൾ താങ്കളുടെ അസുഖം കുറയാറുണ്ടോ?
   അതെ ☐ ഇല്ല ☐ കുറച്ച് ☐

9. ഈ മരുന്നുകൾ കഴിക്കുമ്പോൾ എന്തെങ്കിലും ബുദ്ധിമുട്ടുകൾ അനുഭവിച്ചിരുന്നോ?
   അതെ ☐ ഇല്ല ☐

10. കുറിപ്പില്ലാതെ വാങ്ങുന്ന മരുന്നുകളുടെ പാർശ്വഫലങ്ങളെ കുറിച്ച് നിങ്ങൾ ബോധവാനാണോ?
    അതെ ☐ ഇല്ല ☐ കുറച്ച് ☐

11. കഴിഞ്ഞ 2 മാസത്തിൽ എത്ര തവണ വൈദ്യസഹായം എടുത്തു?

12. വീട്ടിൽ എന്തെല്ലാം മരുന്നുകൾ ഉണ്ട് (മരുന്ന് പെട്ടിയിൽ)? അവ എന്തിനൊക്കെ ആണ് ഉപയോഗിക്കാറുള്ളത്?

13. Drug Information Centre (DIC) എന്ന സേവനത്തെക്കുറിച്ച്

കേട്ടിട്ടുണ്ടോ?		ഉപയോഗപ്പെടുത്തിയിട്ടുണ്ടോ?	
അതെ	ഇല്ല	അതെ	ഇല്ല

14. ഫോൺ മുഖേന ലഭിച്ച വിവരങ്ങളിൽ നിങ്ങൾ സംതൃപ്തരാണോ?

Drug Interaction	Adverse Drug Reaction	Contra Indication

15. ലീഫ്‌ലെറ്റ് ഉപകാരപ്രദമായോ?
    അതെ ☐ ഇല്ല ☐ കുറച്ച് ☐ not given ☐

16. tele-counselling ഉപകാരപ്രദമായോ?
    അതെ ☐ ഇല്ല ☐ കുറച്ച് ☐ not given ☐

Effectiveness of pharmacist intervention on self-medication 2