Factors Influencing Consumer Preferences for Over –The-Counter (OTC) Allopathic Medicine.

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By

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Thesis Completion Certificate

This is to certify that thesis entitled on **"Factors Influencing Consumer Preferences For Over –The-Counter (OTC) Allopathic Medicine"** submitted by **Mr. Aniruddha Bhowmick**, in partial fulfillment of the requirements for the award of Degree of Philosophy is an original work carried out by him under our joint guidance. It is certified that work has not been submitted anywhere else for the award of any other diploma or degree of this or any other university. We also certify that he complied with the plagiarism guidelines of the university.

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Declaration of Authorship

I declare that this thesis entitled ‒Factors Influencing Consumer Preferences for Over-The-Counter (OTC) Allopathic Medicine‖ submitted by me in fulfillment of the requirements for the award of the degree of Doctor of Philosophy in Management by the ICFAI University Jharkhand, Ranchi is my own work. It contains no material previously published or written by another person nor material which has been accepted for the award of any degree or diploma of the university or other institutes of higher learning, except where due acknowledgment has been made in the text. I further state that I complied with the plagiarism guidelines of the university, while preparing the thesis.

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ABSTRACT

Over-the-counter drugs are non-prescription drugs that can be bought by individuals without a doctor‘s prescription and are considered to be safe for consumption without the doctor‘s consent. The Indian OTC market was valued at Rs.188.6 billion in 2018, and it is expected to reach Rs.441.1 billion by 2024, with an anticipated CAGR of 14.20% during the forecast period, 2019-2024 (Businesswire, 2019)

One of the common phrases in the field of marketing is ―Customer is King‖, By keeping the customer in the mind marketers do their research and thereby create unique products to fulfill the needs and wants of the customers. The purchasing behavior of the consumer gets affected due to various factors; such as Psychological factors, Personal factors, Social factors, cultural factors etc. The research attempts to reveal the factors that influence behavior of consumers towards the OTC (Over the Counter) allopathic medicine through Ajzen‘s theory of planned behavior in the domain of health and medicine.

The objective of the study is to examine the factors influencing consumer behavior with respect to OTC allopathic medicine.

All the relevant variables that influence consumer behavior were identified through secondary data sources obtained out of the literature review . The review has been designed in the line of terminologies as obtained or collected during the study. A focus group discussion was conducted to identify the factors on the foundation on which the draft questionnaire was prepared. Based on the inputs gained from the pilot study, the final questionnaire was developed. The stratified random sampling method was adopted for selecting samples of consumers from both rural and urban population of Hooghly district. Out

of 500 responses 441 were considered for the study. Various statistical techniques such as exploratory factor analysis, regression analysis and descriptive methods were used to study the buying behavior with respect to OTC allopathic analgesic topical medicines.

The study concludes that among three factors under the Theory of Planned Behavior that is attitude, subjective norms and perceived behavioral control: perceived behavioral control plays the most decisive role in determining the consumers‘ intention to purchase OTC allopathic medicine, which is followed by attitude and least influenced by subjective norms. Out of variables considered under Perceived Behavioral Control, availability was the most dominant factor for influencing intention to purchase OTC allopathic medicine. Demography has minimum or nominal influence in consumers decision making process. Among the different variables under demography income has the highest level of impact but in a negative direction. This means higher the income of the consumers lower will be the intention to purchase OTC allopathic analgesic topical medicines.

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List of abbreviations

OTC : Over the counter medicine

NCMEH : National Commission on Macroeconomic and Health

ORGI : Office of Registrar General of India

OPPI: Organization of Pharmaceutical Producer of India

FDA: Food and Drug Administration

FDC : Fixed Dose Combination

FTC: Federal Trade Commission

NSAID: Non-Steroidal Anti Inflammatory Drug

CAGR: Compound Annual Growth Rate

DCA: Drug and Cosmetic Act

DCR: Drug and Cosmetic Rule

COX: Cyclooxygenase Pathway

FMCG: Fast Moving Consumer Goods

TRA: Theory of Reasoned Action

IAO: Interest Activities Opinion

HBM: Health Belief Model

TPB: Theory of Planned Behaviour

IAO: Interest Activities Opinion

MD: Medicinac Doctor

MBBS: Bachelor of Medicine and Bachelor of Surgery

ANOVA: Analysis of Variance

SPSS: Statistical Package for the Social Sciences

SEM : Structural Eqational Modeling

CHAPTER I

INTRODUCTION

1.1 Chapter 1: Introduction

Good health is one of the fundamental values of human being which is also a need and a basic human right. Universal access to healthcare is essential for the balanced development of the nation. With the present population of 1.3 billion along with growth rate of 1.2% every year, longevity has doubled from 32 years in 1947 to 66 years in 2004 (NCMEH, 2005) India will reach 1.53 billion by the end of 2030 (ORGI 2011). About 60% of the country‘s‘ populations live in villages and out of this 65% of the rural populations have no access to medicines and other health care facilities (OPPI, 2013). Moreover, urban and rural populations are more or less dominated by acute ailments, for which they require urgent relief from those diseases. For health care purposes the poorest 10% of the population has to rely on sales of their assets or borrowings, entailing inter-generational consequences on the family's ability to access basic needs, thus affecting their long-term economic prospects (NCMEH, 2005). On an average, the waiting time to consult a medical practitioner ranges from 3 hours per patient in Govt. hospital and 45 minutes for the private clinic (Madhav, 2013). Although India accounts for 16.5% of the global population, we contribute to a fifth of the world's share of diseases that can be eradicated by minimum medical care.(NCMEH, 2015). According to this report, common people look for faster remedy from illness at a minimum cost and the new market of over the counter medicine has evolved at a rapid space keeping in line with the requirement of the patient for treating minor ailments. It is a well-known fact that many prescription medicines in our country are easily available even without a prescription. Of these, some are suitable to be categorized as over the counter medicines. The pharmaceutical and healthcare industry has taken an effort to counterbalance the

requirement by providing the necessary medicine which can be used to treat the minor ailments without the recommendation from a registered medical practitioner (Mckinsey Report, 2015).

1.2 Over-The-Counter (OTC) Medicine

In most countries of the world, medicines are well classified, including the category of OTC medicines. Such a specific category does not exist in India. Different stakeholders exhibit varying understanding and opinions about medicines which can be sold without a prescription, which can be recommended by a pharmacist and which can be sold only on a doctor‘s prescription (Indian Pharmaceutical Association, 2017). Pharmacists or retailers often have to face the criticism that they dispense prescription medicines without a prescription; even patients can purchase any medicine as per their choices. If a prescription drug is approved for certain indications that can be diagnosed and prescribed by a medical practitioner then that drug can never come under over-the-counter promotion. Sometimes consumers learn about the effect of drugs depending on their physical well-being after they have taken it as a remedy of certain ailment. Drugs taken to treat non-chronic ailments are typically used up or discarded after the patient recovers or when the patient has switched it for another drug because the first drug did not work satisfactorily. This observation allows the conjecture that the recurrent use of a drug creates a learning opportunity at each purchase occasion based on the consumer‘s perception of the drug (Shohel, 2013).

The Durham–Humphrey and Kefauver–Harris Amendments (Federal Food Drug and Cosmetic act,1951) define criteria to be used by the FDA in evaluating a new-drug application for a proposed over-the-counter drug. The required demonstrations of safety and

efficacy for an over-the-counter drug include components distinct from those for prescription drugs. These are the criteria:-

1. Can the patient recognize and diagnose himself or herself about the condition specified in the proposed indication?
2. When reading a product label, can the patient extract the key information necessary to use the drug properly?
3. Will over-the-counter medicine be effective when used as recommended?
4. Is the drug safe when used as instructed in the manual?
5. Are there any contraindications against usage of a particular drug?

While it is essential that many medicines need to be dispensed against a prescription, there are many other medicines which may be dispensed under the supervision and wisdom of a pharmacist without a prescription. To remove this ambiguity The Indian Pharmaceutical Association and Central Drugs and Control Organization have proposed the over the counter medicines in two categories:

- Single Ingredient OTC
- Fixed Dose Combination (FDC) OTC (Indian Pharmaceutical Association, 2017)

Also, we need to have two subcategories of OTC medications:

Table 1.1 Categories of OTC medicines

Sl. No.	**Suggested Category**	**Brief Description**	**For example**	**Justification**
1.	OTC Medicine– (Pharmacy) – (Non-prescri	OTC Medicines - to be sold only through pharmacies	Aspirin, Antacids, Paracitamol, Topical preparations of certai n NSAIDs (Ibuprofen, Diclofe	The presence or supervision of a pharmacist is important. Besides, it is easier to track the medicines

	ption medicine)		nac), Cetirizine, Albendazole, Mebendazole, Povidone-Iodine preparations, Ranitidine, Ibuprofen (200mg), Normal saline nasal drops, Xymetazoline nasal drops, etc. In addition, a all Drugs which are currently under Schedule K	when sold to licensed pharmacies, which are regulated by the drug regulatory authorities.
2.	OTC medicine – General Sales	OTC medicine - which could be sold through outlets other than pharmacies also.	Dettol, Savlon, Band-Aid etc.	

As per the guidelines of the Consumer Health Care Product Association, there are some restrictions while promoting any drug under the label of OTC which is strictly monitored by FTC.

1.3 Types of OTC medicines

The over the counter medicines can be categorized as

OTC Medicine Sold Through Pharmacies:

I. These medicines can be sold through pharmacies and not in any other shop. They can be displayed to the public but they should be out of reach (no choose and pick) from

consumers. Such medicines can be stocked for sale to the patient only by a duly licensed pharmacy (retail/hospital pharmacy).

II. OTC medicines that are dispensed against a proper prescription of a registered medical practitioner, who is registered with the State Medical Council in which he practices or can be recommended on its own by a registered pharmacist in the pharmacy to a patient. If the pharmacist feels that such medications should not be dispensed to the patient, he shall not dispense it.

While dispensing such medicines, the pharmacist should preferably provide guidance and help the patient in selecting the right medicine and the dose. The pharmacist also counsel the patient about the correct use of the drug, precautions to be taken, any contraindications, adverse effects to expect and which to ignore and which to report, when to refer to a doctor, etc.

III. The maximum quantity of medicines which can be prescribed in one prescription and/or dispensed/sold at one time to a patient should be specified separately in the drug and cosmetic rules for each drug in this category.

IV. Prescription validity and its time limit should be well defined.

V. The sale to the patient can be done only by a retail pharmacy and not a wholesaler. The sale has to be done under the direct supervision of a registered pharmacist.

OTC General Sale Medicine:

1. Beside pharmacies, these medicines can be sold at shops/general stores. The medicine label should specify that it is an OTC general sales medicine, have a specific symbol designated to it.

2. These medicines can be advertised to the public, but without making claims, or misleading the public. All advertisements should also contain the warning messages in bold and easy to

locate and legibly written in communicative language as well as vernacular language. Examples of drugs in this category include Dettol, Savlon, Band-Aids, etc.

There are insufficient number of doctors in our country predominantly in rural areas. For this over the counter (OTC) medicines sales should be encouraged through pharmacists to the patients who will greatly benefit the society.

OTC Medicines For Different Therapeutic Areas

The usage of pharmaceutical products is governed by the medical science. The four primary medical sciences are as follows:

A. Allopathic which is modern medical science has gained immense popularity

B. Ayurveda or ancient Indian sciences (mainly herbal remedies)

C. Unani which is of Chinese origin more prevalent in South East Asian countries.

D. Homeopathy was fairly popular from the 19^{th} Century.

But presently pharmaceutical medicine is more focused on Allopathy, the most modern medical science. The other modes of medical treatment such as Homeopathy, Unani, Ayurveda is less dominant than Allopathic treatment.

Formulations of over the counter drugs can be categorized as per the route of administration to the patient:

Table 1.2 Categories of OTC medicines as per the route of administration

Oral	Tablet, syrup, capsule, powder, etc taken internally
Topical	Ointments, cream, liquids that are applied to the skin
Parenteral	Sterile solutions that are injected intravenous or intramuscular
Others	such as eye drop and surgical dressings

(Source: Journal of Scientific and Industrial Research, March 2002)

For the ease of prescription, OTC medicines can be categorized as per their end use; therapeutic effectiveness against a particular disease or aliments molecular composition. The major therapeutic categories and the key drugs therein are detailed subsequently.

Table 1.3 Categories of OTC medicines based on therapeutic effectiveness for a particular disease.

Sl.No	Disease Area	Molecule	Remedies
1.	Aches, Pains, And Headaches	Acetaminophen, Nonsteroidal anti-inflammatory drugs (NSAIDs)	External analgesics, such as pain relief creams and gels, can help with headache, arthritis pain, sprains, and other minor joint and muscle problems.
2.	Fever	Acetaminophen, Ibuprofen	These drugs help reduce fever in children and adults
3.	Cold, Sore Throat, Cough	Guaifenesin Menthol throat lozenges Liquid cough medicines with dextromethorphan	Cold medicines can treat symptoms to make you feel better, but they do not shorten a cold
4.	Decongestants:	Pseudoephedrine Oxymetazoline Phenylephrine	Decongestants help clear a runny nose and relieve postnasal drip. Decongestant nasal sprays may work more quickly, but they can have a rebound effect if you use them for

			more than 3 to 5 days. Symptoms may get worse if kept using these sprays.
5.	Sore Throat Medicines	Dycloninephenol Acetaminophen, Ibuprofennaproxen	Sprays to numb pain Painkillers, Hard candies that coat throat
6.	Allergies	Diphenhydramine, Chlorpheniramine, Brompheniramine, Clemastine	Antihistamine pills and liquids work well for treating allergy symptoms.
7	Stomach Upset	Loperamide, Rehydration fluids, Kaopectate	These medicines slow down the action of the intestine and reduce the number of bowel movements.
8	Skin Rashes And Itching	Miconazole, Clotrimazole Ketoconazole	May help with itching, mild rashes diaper rashes and rashes caused by yeast

(Source**:** U.S. National Library of Medicine , 2017)

Topical Analgesic Allopathic OTC Medicine

Analgesics are medicines that are used to give relief from pain. They are also known as painkillers or pain relievers. In medical terminology the term analgesic refers to that group of medicine that provides relief from pain without putting a patient to sleep or making lose of consciousness.

The topical allopathic analgesic market is segmented based on therapeutic class, type and formulation. On the basis of therapeutic segmentation, it is segmented into non-opioids and opioids. The non-opioids segment is further classified into non-steroidal anti-inflammatory drugs (NSAIDS), methyl salicylate, capsaicin, lidocaine, and other non-opioids. The largest topical pain relief market share of 2017 is occupied by non-opioids segment and is expected to continue growth throughout the next 2 years due to high preferability and acceptability of non-opioids drugs in India (Jaiswal & Srivastava, 2018).

. There are three category of analgesic topical medicine. They are as follows:

Paracetamol = For mild to moderate pain associated problems, such as back pain or headaches, simple painkillers

Non-steroidal anti inflammatory drugs (NSAIDs) = Use these at the lowest dose that improves symptoms and only use for a short time. Not for co morbid patients.

Opioids= type of opioid agent related to morphine. Codeine and codeine-containing medicines are not available without a prescription

With rise in modern lifestyles there is a growing demand for convenience and instant results from pain by providing tailored treatments to patients, without decreasing efficacy of analgesic. While acute pain is an alarm but chronic pain is a syndrome which requires scrupulous selection of analgesic medicines of high bioavailability for long-term use. Such criteria are challenges that topical medications aim to overcome, allowing progressive delivery of active component, maintaining stable plasma levels, with a good safety profile (Jorge et.al, 2010). This research is regarding understanding the factors influencing consumer for topical formulations of the most widely used OTC allopathic analgesic topical medicines. Some of the most common brands of topical analgesic allopathic medicines are Volitra gel, Volini cream, Nice gel, Moov cream, Clovis gel, Rolex gel, Moveon cream, Voviron gel, Iodex etc. In India there are approximately 104 brands widely used. Although there are some limitations on topical agents to be used for peripheral conditions, but increasing evidence which supports the efficacy of these preparations in blocking nociceptive and neuropathic pain. Patient adherence to medical treatment is also a challenge, especially in chronic painful conditions. It is known that reduction of treatment complexity and pill burden are good strategies to increase patient compliance (Jorge et.al, 2010)

From the studies, it has been found that the topical analgesics allopathic OTC medicine segment is gaining popularity day by day. A similar condition prevails for India also. The term analgesics encompasses a class of drugs that are designed to relieve pain without causing the loss of consciousness (Fookes, 2018) According to the source there are different classes of analgesic drugs include:

I. Non-steroidal anti-inflammatory drugs (Non Steroidal Anti Inflammatory drugs), such as ibuprofen, naproxen or prescription Cox-2 inhibitors. NSAIDs are commonly used to reduce pain and inflammation. Since inflammation is often a component of back pain, NSAIDs are often used for of the treatment regimen for many types of back pain. It‘s commonly used in pain relief ointment or cream. In India, these products are widely advertised under OTC medicines.

II. Narcotics, such as morphine, and synthetic narcotic drugs, such as methadone, may be used for pain relief. Narcotic work by dissociating the patient from the pain. Although the pain is still present the sensation of the pain is changed by the narcotic. All narcotics are carrying the risk of addiction, and cannot be sold without a doctors‘ prescription.

III. Tylenol (acetaminophen) is a centrally acting non-narcotic pain reliever that does not have an anti-inflammatory effect. It does not cross-react with NSAIDs and therefore the two classes of medications can be taken together. Many analgesic medicines that are available in the market have a combination of acetaminophen and NSAID which provides instant relief from pain to the patients (Moerman, 2002).

1.4 Allopathic OTC Medicines Market Global Scenario:

Globally Over the Counter Drugs market was valued at USD 303.51 billion in 2018 and is expected to be valued at USD 491.02 billion in 2024, witnessing a CAGR of 8.5%.

The factors that can be attributed to such growth are:

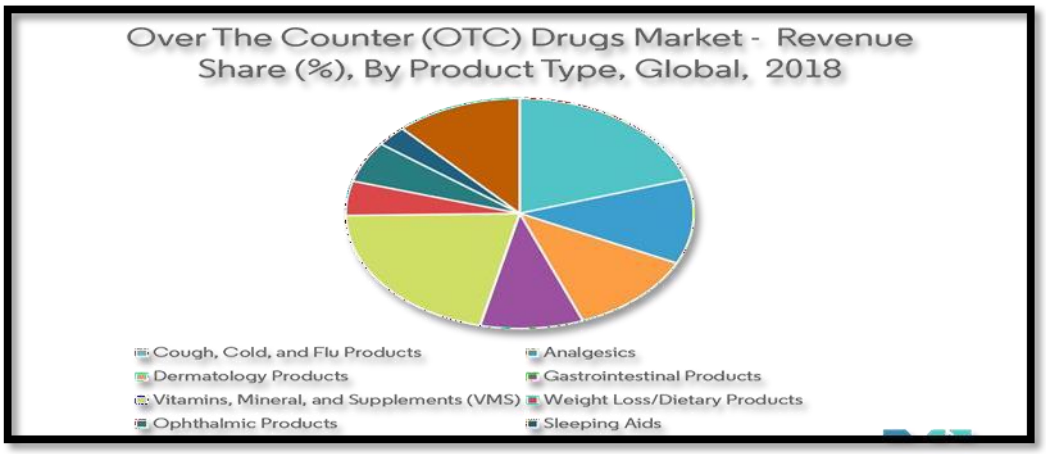
- Product innovations
- High penetration in the emerging market
- Favorable regulatory framework and inclination of pharmaceutical companies towards OTC drugs from Rx drugs.

- With the highest growth rate in the emerging markets of Latin America, and South East Asia over the coming years.

Furthermore:

- A rapidly growing population, coupled with the fact that the middle class in these regions is expanding on a large scale.
- Increase in disposable income of the population, which will add critical mass to the population available to access OTC medication have also triggered the growth in the global business.

Figure 1.1: OTC Medicines Revenue Share By Product Type Globally



- (Source:www.mordorintelligence.com/industry-reports/global-over-the-counter-OTC analgesic allopathic medicine-drugs market-industry). The global OTC analgesic topical medicine market was valued at $7,481 million in 2017, and is projected to reach $13,276 million by 2025 at a CAGR of 7.4% from 2018 to 2025 (Jaiswal & Srivastava, 2018)

. This growth of topical analgesic market is majorly driven by

- rise in diabetic neuropathy
- arthritis and other bone-related conditions
- vitamin D deficiency
- over weight among populations

- increase in gastritis problem by over use of oral pain killers
- Rise in geriatric population across the world demand by sports players and younger generations are the factors that stimulate the growth

1.5 US OTC Pharmaceuticals Market

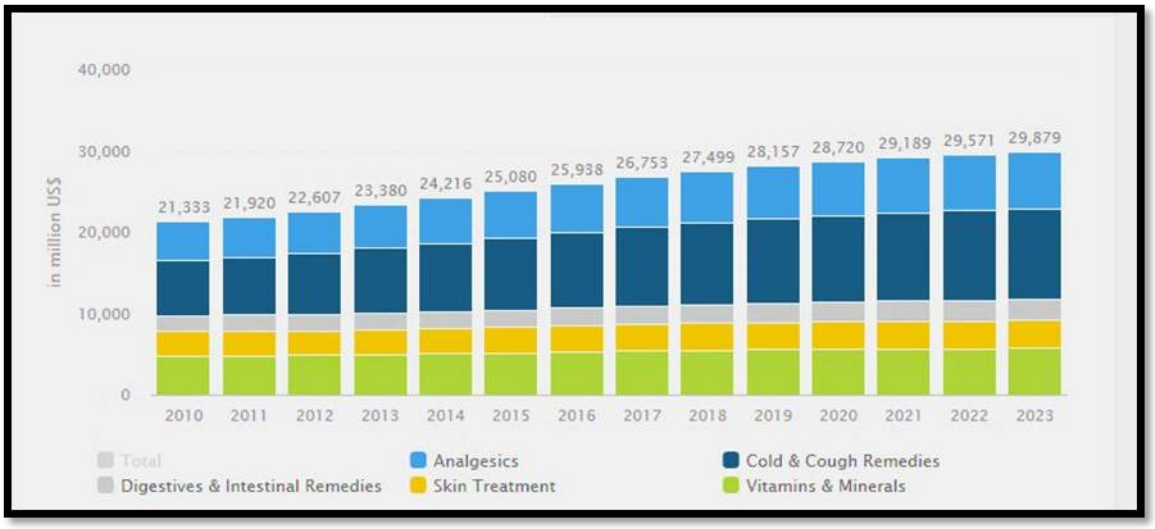
In US, approval of over-the-counter (OTC) status for a drug requires an assessment by the FDA whether the drug is safe and effective. Alternatively, a drug can be marketed over the counter if its ingredients are included in previously published regulations defining the requirements for over-the-counter status and if the labeling of the product complies with these regulations. These regulations also apply to drugs that have already been approved for only sales under advice for medical consultants which are expected to see a switch to over the counter medicines(International Marketing Conference on Marketing & Society, 2007). The Drug Price Competition and Patent Term Restoration Act of 1984 potentially provides three additional years of marketing exclusivity for the makers of drugs switched from prescription to over-the-counter status if the FDA has required additional clinical trials deemed essential to evaluate the switch. If a prescription drug is approved for over-the-counter marketing, the drug may still be available by prescription for certain indications or for use that doses not approve for over-the-counter marketing (Journal of Business Ethics, 2006).

According to CAGR (2019-2023) report:

- Revenue in the OTC Pharmaceuticals market amounts to US$28,157m in 2019. The market is expected to grow annually by 1.5 % .
- In global comparison, most revenue is generated in the United States US$23,962m in 2019.

- Concerning total population figures, per person revenues of US$56.46 are generated in 2019.

Figure 1.2: OTC Medicines Revenue Share By Product Type In U.S Market



(Source: Statistica, January 2011)

Table 1.4 Percentage distribution of US OTC analgesic topical allopathic pharmaceutical market.

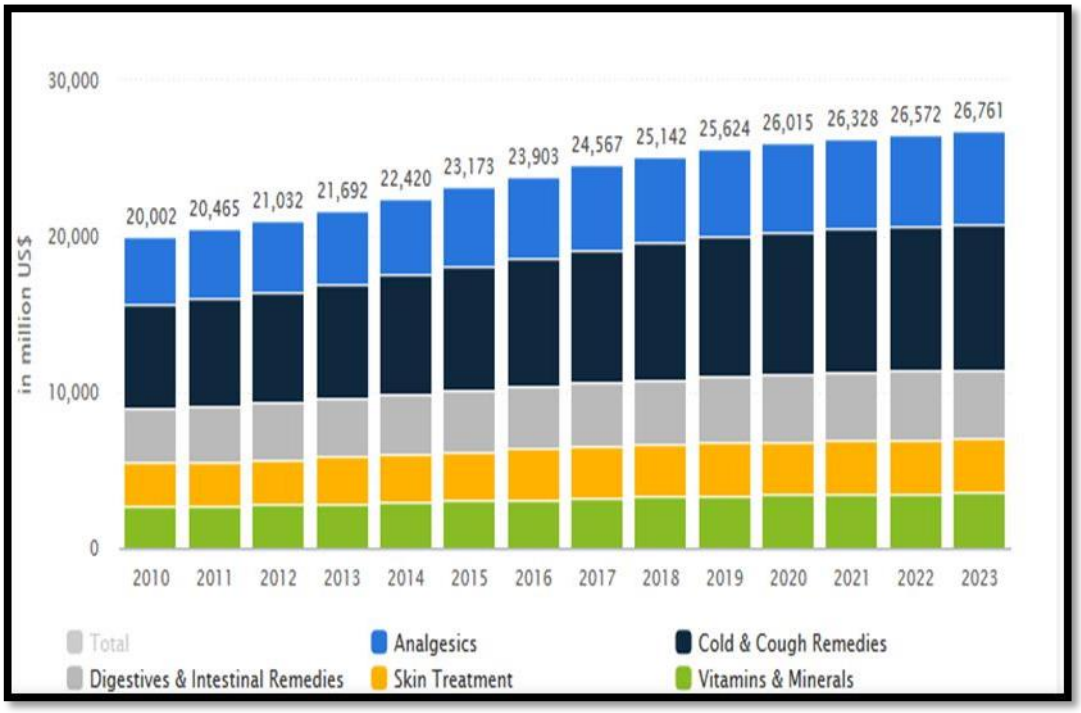
Channel	Percentage share (%)
Pharmacies/drugstores	32.30
Mass merchandisers /warehouse clubs	20.80
Supermarkets/hypermarkets	8.60
Other	38.30

(Source: Arthur D Little, 2016)

1.6 European OTC Pharmaceuticals Market

The European over-the-counter drug market has been estimated at USD 33.5 billion in 2017. The market is expected to register a CAGR of 3% during the forecast period (2018-2023). Germany accounted for the largest market in the European region. Germany is estimated to be the largest market in Europe, with a market share of 22%. However, the annual growth of the developed countries of Europe is decreasing, whereas in developing countries, such as Poland, the growth in sales is visibly evident in the positive scale, mainly due to the lack of penetration and the lenient regulatory framework. The United Kingdom is also one of the market leaders in Europe, with a market share of nearly 10%. (Europe Over The Counter Drug Market, 2018). Rising pharmaceutical (OTC) spending in European countries as an affordable treatment option is escalating the demand for OTC drugs in the region. This is supported by rising healthcare expenditure in European countries such as Germany and France where high awareness about self-care among people is increasing the use of low-priced OTC medicine for minor ailments, thus positively impacting the growth of OTC drug market in the region **(Research and Markets. com's, 2018)**

Figure 1.3: OTC Medicines Revenue Share By Product Type In European Marke



(Source: Statistica, January 2011)

Table 1.5 Percentage of European OTC analgesic topical allopathic pharmaceuticals Market

Channel	Percentage share (%)
Pharmacies /drugstores	88.00
Specialist retailers	7.30
Supermarkets/hypermarkets	2.40
Other	2.20

(Source: Arthur D Little, 2016)

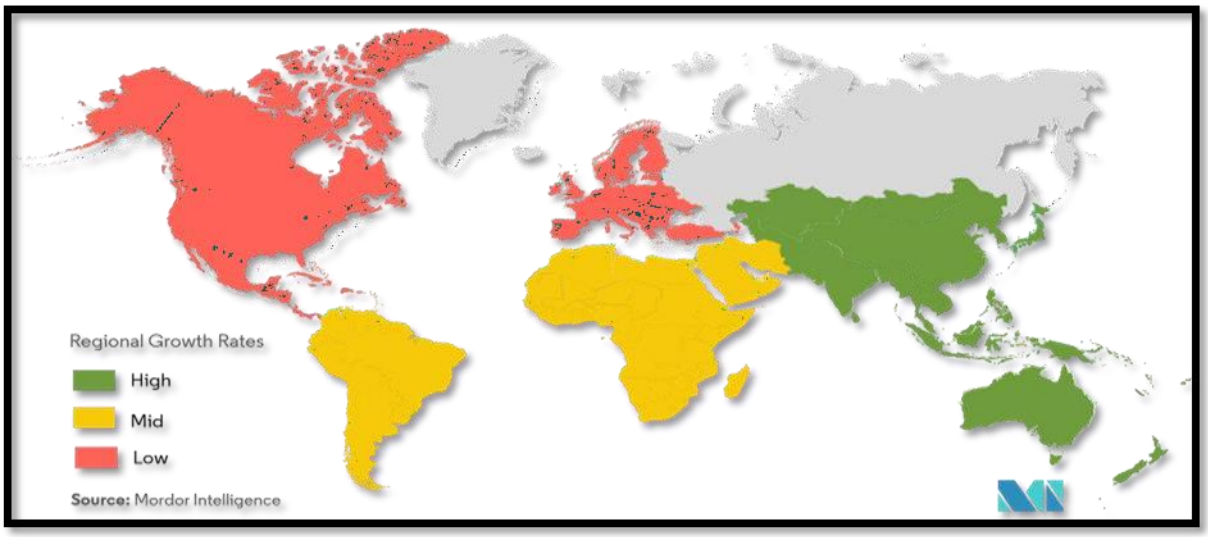
The growing appetite for self-medication and healthcare cost curtailment has led to OTC analgesic topical allopathic medicine market expansion in major economies of the world. The U.S. with China and Japan accounted for nearly 50% of the OTC medicine industry share in

2016. The growth of the OTC analgesic topical medicine industry might slow down in the U.S. due to market saturation but is expected to increase with a phenomenal rate in China, owing to the growing geriatric population in the country. Europe OTC analgesic topical allopathic medicine market size is also expected to witness major expansion, driven by the fact that the governments of countries such as UK and Germany have been striving to decrease healthcare costs.

1.7 Asia-Pacific OTC Pharmaceuticals Market

The Asia-Pacific over the counter (OTC) medicine market is expected to witness a CAGR of 6.2% during the forecast period, 2018-2023. North America currently holds the largest share in the market, due to the increasing expenditure in healthcare. Asia-Pacific is expected to dominate the market due to the increasing access through new channels, players keen to promote self-medication, and key players building strong brand existence. China is predicted to be one of the largest OTC medicine markets by 2021 and the growth is fueled by factors, such as self-medication by patients.

Figure 1.4: Over The Counter Drug Market- Growth Rate By Region (2018)



(Source: Mordor Intelligence, 2018)

Asian countries currently dominating the market for Over the Counter medicine and are expected to continue its stronghold for a few more years which is followed by North American and European countries. The countries in South East Asia have so far reached differing levels of development in the OTC marketplace, some increasing their turnover dramatically while others are showing only a moderate size increase. In total, however, the South East Asian OTC allopathic analgesic topicaltopical market has made a strong progression, growing 46% in value since 1990. Healthy Growth For Philippines, Thailand and Indonesia The three fastest-growing OTC allopathic analgesic topicaltopical markets in South East Asia from 1990 to 1994 were the Philippines (131.2%), Thailand (110.7%) and Indonesia (80.9%) (Pharma Letter Pipeline Review, 2019)

1.8 Indian Allopathic OTC medicine market

India is known for its traditional medicinal systems—Ayurveda, Siddha, and Unani. Medical systems are found mentioned even in the ancient Vedas and other scriptures. The Ayurvedic concept appeared and developed between 2500 and 500 BC in India (Subhose, 2005). Food is

the major source for serving the nutritional needs, but with growing modernization, some traditional methods are being given up. There is an ever-widening gap in nutrient intake due to which normal life is no longer normal (Pandey, 2013). However, the affluence of the working population with changing lifestyles and reducing the affordability of sick care, in terms of time and money involved, are some of the forces that are presently driving people towards thinking about their faster remedies at affordable cost.

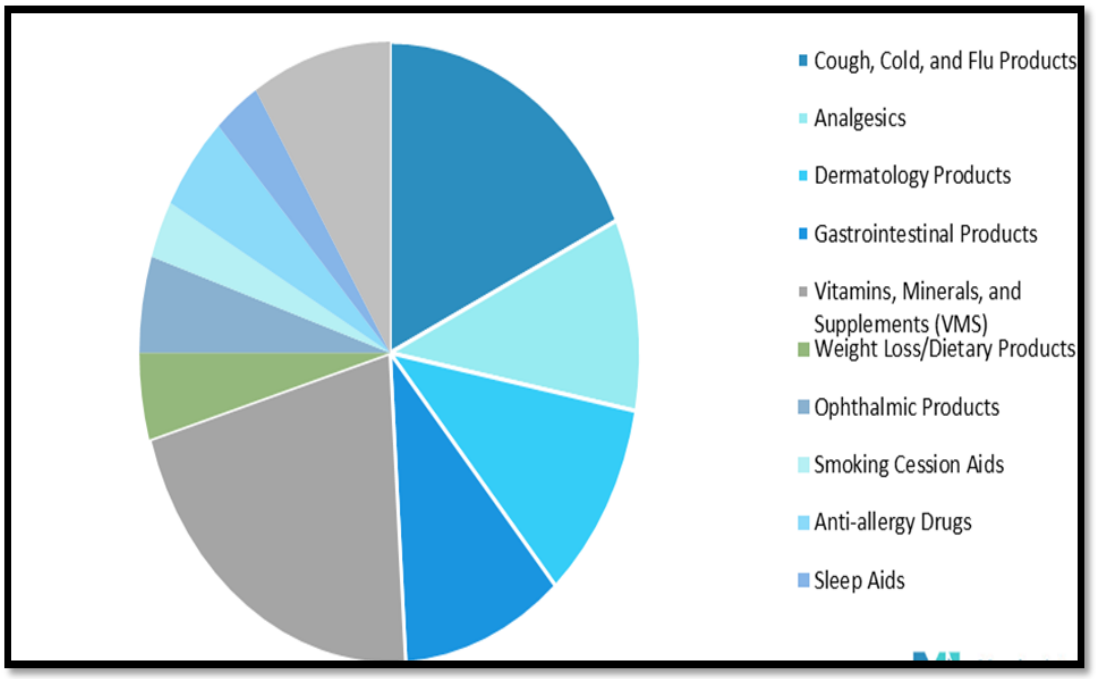
In India, OTC medicine means drugs legally allowed to be sold „Over The Counter‘, i.e. without the prescription of a Registered Medical Practitioner. Though the phrase has no legal recognition, all the drugs that are not included in the list of _prescription drugs‘ are considered as non-prescription drugs (or OTC medicine). Prescription Drugs are those that fall under two schedules of the Drug and Cosmetics Rules, 1945: Schedule H and Schedule X. Drugs falling under Schedule G requires the following mandatory text on the label: ‒Caution: It is dangerous to take this preparation except under medical supervision‖ and hence are not advertised to the public voluntarily by the industry. In India, the import, manufacture, distribution and sale of drugs and cosmetics are regulated by the Drugs and Cosmetics Act (DCA) and its subordinate legislation, the Drugs and Cosmetics Rules (DCR).

OTC medicines may have even stronger potential in India. There is an increasing trend among Indians who are ready to spend more than before for OTC medicine. (India Over the Counter Drugs, 2019-2024). The Indian OTC medicines market **is** expected to register a growth rate of nearly 9.2% over the forecast period from 2018 to 2023. The Indian Pharmaceutical Industry ranks third with respect to volumes and thirteenth with respect to value, on the global level (Deshpande, 2018). The value of the Indian OTC drugs market is estimated to be US$ 2.7 billion (Rs 188.6 billion) at a compounded annual growth rate of 9% to reach around $6.5 billion (Rs 441.1 billion). The Government is now considering plans to expand the list of drugs that can be sold outside pharmacies since many common household

remedies are more difficult to obtain in India than in other developing countries(Global Pharma Outlook, 2018). Most of India‘s population relies on self-medication, and the purchasing power of the middle class is growing. These trends in the rising of purchasing power should drive growth in cough and cold formulations, gastrointestinal, analgesics, and dermatology. Indian consumers are also focusing on prevention and wellness, which should contribute to continued increases in sales of OTC vitamins and minerals. The market is already growing strongly. Profitable OTC medicine for some of India‘s largest pharma companies includes artificial sweeteners, emergency contraceptive pills and nutritional supplements. Some global pharma companies are already launching their OTC products in India or buying OTC products from other Indian companies. Novartis India launched Calcium Sandoz as an OTC supplement in 2000 and has now come out with Otrivin nasal drops in a spray form. Pfizer has launched Listerine, Benadryl, Caladryl and Benylin in India, which were later sold to Johnson and Johnson. In the future, India may also serve as a manufacturing location for OTC products destined for other markets. In August 2009, US-based OTC manufacturer Perrigo announced the purchase of 85% of Indian contract manufacturer Vedanta. The company plans to shift some of its current production from facilities in Israel and Germany to India by 2011(Global Pharma Outlook, 2018).

India‘s regulatory framework permits advertising for OTC allopathic analgesic topical medicine, and consumers can buy them without a doctor‘s prescription. However, a wider distribution network will also boost the growth of such products. Currently about half of OTC allopathic analgesic topical medicine sales come from chemists, while grocery stores and general stores account for over a third of the sales. Seventy three Pharma companies are also targeting post offices to sell OTC allopathic analgesic topical medicine in rural India. This move could substantially increase the access to OTC medicine, especially in areas where there are no pharmacies.

Figure 1.5: India OTC Medicine Market: Revenue In USD Million, By-Products (2017)



(Source: Mordor Intelligence, 2018)

Only 35 % of the population has access to allopathic drugs (Census report, 2011). There is a need to create an infrastructure that will guarantee both access to medicines and provide medical support for the poor. There is an urgent need to design interventions to modify the behavior of everyone involved in the pharmaceutical supply chain (Producers, providers, retailers, consumers, and Govt.) in order to reduce over prescribing, inappropriate drug use and rationalize the health expenditures. Currently, non-pharmacy stores can sell few drugs listed in Schedule K (old and safer drugs) according to the Drugs & Cosmetics Act in rural areas whose population is below 1,000.

Table 1.6 Percentage of Indian OTC allopathic analgesic topical Pharmaceutical Market.

Channel	Percentage share (%)
Pharmacies / drug stores	73.60
Specialist retailers	12.50
Supermarkets/hypermarkets	12.60
Other	1.40

(Source: Statistica, January 2019)

1.9 The Changing Consumer Mindset Regarding OTC Medicine

Today's consumers are more informed, use more gadgets, lead a fast life and thereby face a higher stress. Even the environmental changes in the form of ever-increasing pollution in urban and rural areas, stressful workplace environment and fast-changing technology which continuously put pressure to adapt and adjust, heavy traffic leading to increasing commuting time, consuming lot of junk food, use of addictive products to stay awake on the job for longer hours and eating on the run put more stress on the body which results in psychosomatic disorders like frequent common cold, headache, acidity and indigestion issue, constipation, athirst pain, pain in lower limbs due to over-weight, allergy, backache, chronic fatigue etc which they are trying to overcome with Over The Counter (OTC) medicines. Other major winners in the OTC medicine category include products where patients continue to buy particular remedies following an initial doctor‘s prescription.

This ultimately leads to a steady increase in self-medication for the past few years. The empowered customers of today feel more independent and autonomous and are hesitant to adopt the traditional model of doctor prescription, monitored medication and supervision throughout the treatment period to manage common ailments. With increasing medico-legal

cases, doctors are also not ready to take any risk and insist on a detailed investigation to diagnose even a common ailment. This adds to the already existing high cost of following the traditional treatment process.

Self-administration of medicines with over-the-counter drugs relies on the patient's judgment, which is supplemented by the information on the label, for the correct diagnosis of the disorder or symptom. An incorrect diagnosis may lead to the use of an over-the-counter drug that has no efficacy in treating the actual condition present. In general, the dangers of misdiagnosis involve both the potential adverse effects of the drug when inappropriately used and the risks associated with a lack of treatment for the actual cause of the symptoms.

The benefit after using OTC medicines can be attributed as:

a. Increased access

b. Decreased frequency of visits to physicians, leading to lower healthcare costs

c. Improved education of consumers

d. Increased autonomy of patients

e. Decreased cost to third-party players

The possible risk after using OTC medicines can be attributed as follows:

a. Inaccurate diagnosis

b. Delay in obtaining needed therapy

c. Use of suboptimal therapy

d. Drug resistance

e. Increased costs to patients

f. Failure to follow label instructions (Adverse effects, Drug interactions)

g. Perceived loss of control by physicians

1.10 Attitude and Behavior Linkage

The decision of the consumer to purchase a particular product and consume the same has an overall impact on the particular industry and also on the economy. Though marketers relentlessly try to understand the consumers‘ psychology bearing and suggesting a popular drug, it might become critical for some industries, particularly pharmaceuticals companies as they are construed to be me too products and are classified in the FMCG categories.

How consumers buy and consume products has important implications for any industry. This issue is particularly critical in pharmaceutical marketing because, compared to fast-moving consumer goods; consumer behavior toward pharmaceutical products for over the counter medicines is far more complex. The complexity of consumer behavior toward pharmaceutical products can be attributed to the unique characteristics of consumer behavior within the domain of pharmaceutical marketing (Stremersch, 2008; Stremersch & Van Dyck, 2009).

Around 300 years ago Nicholas Bernoulli, Jonh Van Newmann, and Oskar Morgenstern started to think about consumer behavior (Richarme, 2005). Those economists only explored the act of purchase (Loudon & et al, 1993). A model that resulted from their theory is the "Utility theory" which suggests that consumers choose to have in mind the expected outcomes of their decisions. Consumers are viewed as rational decision-makers who are only concerned with self-interest (Schiffman & Kanuk, 2007) (Zinkham, 1992). However some assumptions like the marginal utility of money is constant, the utility is measurable in cardinal numbers and ignorance of complements and substitutes of the commodity, the consumer is rational, advertisement and ignorance cannot influence the consumer‘s decision etc. make the theory too vague.

To understand a consumer, relatively consistent evaluation process, feelings, and tendencies toward an object or an idea, attitude is regarded as an integral parameter. To understand the

relationships between attitudes and consumer behavior, psychologists have focused on consumer attitude which mainly comprises of beliefs, feelings and behavioral intentions towards some objects. These components are viewed together since they are highly interdependent and together represent forces that influence how the consumer will react to that object. Based on previous research in social psychology, persuasion models, and attitude theories Martin Fishbein and Icek Ajzen in 1967, developed the Theory of Reasoned Action. The theory tried to explain the relationship between attitudes and behaviors within human action. It is mainly used to predict how individuals will behave based on their pre-existing attitudes and behavioral intentions. An individual's decision to engage in a particular behavior is based on the outcomes the individual expects will come as a result of performing the behavior.

To serve this purpose, the focus has been on specifying the composition of an attitude to better explain or predict behavior. Thus understanding attitudes and beliefs is the first step toward changing or reinforcing them to understand consumer behavior for purchasing allopathic over the counter medicine.

1.11 Relevance of The Topic

Over the counter allopathic medicines are gaining popularity as we are progressing. People are becoming health conscious, aware of the disease and precautionary measures. But, with respect to India, not much of systematic research happened to understand the rising popularity among the consumers about the over the counter allopathic drugs. So, with respect to existing literature from across the world, there are many factors that can affect consumer behavior for purchasing over the counter allopathic drugs. So, this research tries to identify the factors for the rising demand of over the counter allopathic drugs specifically in the Indian context. Also, by understanding these facts pharmaceutical companies can improve

their strategy for making the over the counter drugs more sellable and acceptable to the prospective consumers.

As we can see from the above discussion, over the counter allopathic drugs are abruptly gaining popularity due to a rise in awareness among people. Also, as people are becoming more conscious about health and understood certain diseases can be eradicated by minimum medical care so they started behaving more consciously. Still there are many barriers, such as price of the medicines, availability, consumer knowledge about usage, misuse or overdose of medicines etc. In our study, we are considering only allopathic over the counter medicines for treating analgesic segments.

In this context, it is important to examine various psychographic and demographic factors that influence the preferences of allopathic analgesic medicines in and around Hooghly district of West Bengal, India. The variables which can be considered for this study will be related to the theories of perception, learning, social stimulation, motivational factors and other behavioral traits often displayed by an individual in selecting particular OTC medicines to combat the aliments. The consumer‘s perception and the related variables will have to look into for identifying the theory.

1.12 Research Problem Statement:

For last 10 years there was a tremendous growth of OTC pharmaceutical industry in urban as well as rural India but the exact reasons for the rise of demand unknown.

Purpose of the study to know the reasons what motivate this demand and to provide suggestion to the industry so that they can channelized their marketing strategy to drive the growth.

Problems that has been specifically identified as:

1. There is a tremendous rise in the demand of over the counter allopathic analgesic topical medicines in the last couple of years in Indian market. Whether this growth in demand is due to a change in the attitude of the consumer for the over the counter allopathic analgesic topical medicines remains unanswered.

2. The purchase decision of any products is influenced by family, social class, culture, social network or peer group influence. Being over the counter allopathic analgesic topical medicines, how motivated a consumer is with the message received from social influence, social media or expert opinion influence remains a challenge.
3. Apart from attitude and personal perception of social expectation about the over the counter allopathic analgesic topical medicines, any other factor that motivates the consumer for over the counter medicines is not clear.

4. Today‘s consumers are exposed to various marketers‘ activities. Over the counter allopathic analgesic topical medicines is a comparatively new concept of treatment with Indian consumers. As these products categorized under OTC medicines, how effective is the promotional mix motivates the intention towards the purchase and consumer behavior is not clear.

It has been a conscious effort to understand these problem statements in carrying out the research work.

1.13 Research Scope

This study is basically focused on OTC allopathic topical analgesic medicines. Thus it will concentrate on the factors that motivate the consumer to purchase such medicines under Indian scenario.

1.14 Summary

In this chapter, the purpose of the study is being discussed. The overview includes the concept of over the counter medicine and their types along with OTC medicines global market scenario and Indian scenario**.** The chapter also discussed the changing consumer mindset about OTC medicines, their attitude and behavior linkage. The chapter concluded with the research problem statement and relevance of the topic and the scope of the research under OTC allopathic analgesic topical medicine.

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CHAPTER-II

REVIEW OF LITERATURE

2.1 Chapter 2: Introduction

Literature Review is an integrated part of any research. Review of relevant earlier academic, scholarly and research works is an essential component of any academic paper, which creates a strong foundation, based on which knowledge in the domain can be further built and expanded through good literature review. It indicates areas where further research is needed and ratify, opens up opportunities to extend, generalize or contest earlier research findings and conclusions.

An exhaustive literature review has been carried out covering all domains related to the topic, leading to the section on Research Gaps identified. Care has been taken to ensure that the review is not restricted by the narrow geographic boundary to any country or region or on a confined topic. The literature review which is carried out is concept-centric or domain centric. Emphasize has been given to more recent publications in reputed international journals, as they, in turn, have reviewed previous work and have built on past work.

An innumerable number of papers has been reviewed, only those papers advocating concepts relevant to the study have been included in the subsequent sections. Through literature review attempts have been made to report and inform all the relevant advances in accumulated knowledge in that domain However, papers of higher relevance or which appeared to present breakthrough concepts have been discussed elaborately.

2.2 Demographic Factors Affecting Consumer Behavior

Consumer behavior doesn't remain the same or constant in every situation it changes from time to time. There are various factors that affect consumer behavior. As the change comes in these factors, consumer behavior also changes. The demographic factors which affect consumer behavior are (a) age (b) sex (c) marital status (d) income (e) family background (f)

education (g) occupation (h) family size (i) geographic factors. In this grim battle for snatching a maximum share of the market, only those products are destined to emerge victorious who will be able to read the pulse of the consumers. And this is here, where consumer behavior has a very important role to play. There are so many demographic factors like age, sex, income, occupation, education, marital status and family background which affects the behavior of consumers (Rezai, 2013)**.**

This research literature review carried out on concept-centric demographic variables. Demographic variables such as family size and age composition are major determinants of household consumption patterns. The welfare effects of demographic differences and their effects on consumption patterns might seem two sides of a coin. They are not. Even if households regard demographic variables as fixed or predetermined, observed differences in consumption patterns of households with different demographic profiles only enable us to infer their "conditional preferences". If households regard demographic profiles as decision variables, then unconditional preferences can be inferred from their unconditional choices (e.g., choices of family size and a consumption vector) (Pollak and Wales, 2015).

However study, on consumer impulsive buying behavior shows that disposable income and age are related to most impulse buying indicators and to the impulsivity collective indicator. Whereas educational qualification and gender have a marginal association with impulsive buying behavior.

Most studies on generic over the counter drugs have focused on the knowledge, beliefs, and perceptions of pharmacists, physicians, and patients about these drugs (Shannon, 2014). But the literature on upper-middle-income countries lacks studies on the factors that influence the purchasing decision of consumers for over the counter drugs (Sousa ,2013).

Knowledge about over the counter drugs was the main correlate of the preference for purchasing them. According to Guttier (2017) the greater the knowledge or positive perception about generic drugs, the greater is the preference to purchase them. Therefore,

educational campaigns for healthcare professionals and consumers appear to be the best strategy for expanding the use of generic over the counter drugs.

Barten (1964), proposed that the size of the intra household expenditure is positively and significantly affected by the potential age of the family members, the number of children, level of education of the household head. With the rise in the education of household heads' age and education positively affects the expenditure share on education and health care of the family.

Rezai and Mohamed (2013) showed that there is a significant relationship between the demographic factors such as gender, income, age, marital status, and ethnicity. In the case of perceived benefits, the significance of age, income and education level may all be tied with the degree of access to products and exposure to marketing and promotion of the products.

Moderating variables influencing the purchase behavior are gauged based on the research revived. According to Mwambete and Shemsika (2014), Young (2013), and Holecka et al (2012), demographic variables are important. Age, income, education, sex, occupation, social class, the standard of living have an effect on the formation of perception for the consumption of over the counter medicines.

2.3 Consumer Attitude Towards OTC Medicine

The information processing theory in consumer behavior literature suggests that the consumer is an intelligent, rational and problem-solver who actively seeks and uses the information to evaluate the various alternatives or choices. Researchers have documented this information-seeking and problem-solving behavior in the past, but also found evidence that the extent of information search, problem-solving and evaluation of alternatives in the consumer's decision-making process may vary with the significance or degree of importance of the decision to the consumer. The study of consumer involvement has significance because

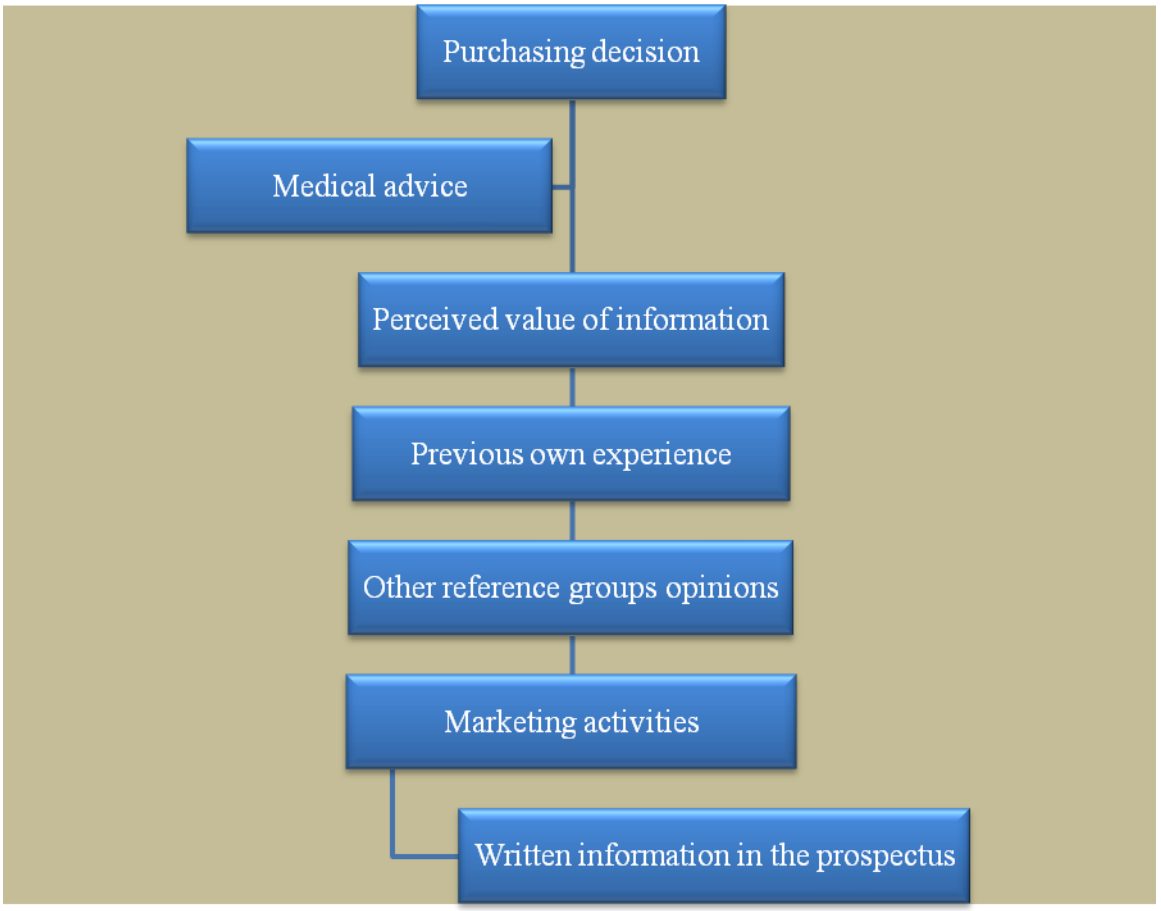
consumers' information search and the attitude towards the purchase of nonprescription medicines is a function of their involvement in the purchase decision-making process (Gore, 1994). Consumer attitudes are a composite of a consumer‘s beliefs, feelings and behavioral intentions toward some object within the context of marketing (Perner, 2010).

In the wake of tremendous achievement in drug discovery of the time, more traditional ways of treating illness were considered both unsafe and ineffective. Accordingly, patients were encouraged by physicians to seek formal care for even the most mundane of illnesses and to use modern pharmacotherapy to rectify the problem. It can be simply said that individuals partaking in self-care take charge of protecting, maintaining and improving their own health status.

Kohli and Buller (2013) in their study on consumer attitude indicated that over-the-counter (OTC) generic drugs and brand name drugs are equally effective, safe, and undergo the same Food and Drug Administration approval process. The economic factors also play an important role in influencing consumers to choose generic formulations, other than this a variety of factors, including advertisements, duration of the OTC effectiveness, severity of sickness, preferable form of OTC medication, safety of the OTC, relief of multiple symptoms, and preferred company, persuades others to pay more for branded drugs. The research revealed that the single most influential factor for consumers when purchasing OTC medicine at lower cost. The author suggested that increased awareness and use of generic OTC medicine may result in substantial cost savings for consumers.

As per Cîrstea et. al (2016) that the purchase decision is influenced by two important factors such as: medical or pharmacist advice and the perceived value of information.

Figure 2.1: Factors That Influence Purchase Decision



(Source: Cîrstea et. al, 2016)

The author showed that perceived value of information is determined by previous own experience, views of other reference groups, the written information in the prospectus, product price or existing advertising or marketing activities. In referring to the views of other reference groups, the most important categories are primarily people who have purchased/used that drug, as well as colleagues, friends or family. Many researchers suggest that previous information or experience provides underlying reasons for repeat purchase or brand switching decisions for over the counter drugs [Ratchford 2001 , Inman 2002]. Also,

Shohel et al. underline that direct experience with the product, price range, and brand reliance are important determinants of repetitive purchase behavior on OTC medicine (Shohel, 2013). Regarding the price, studies confirm that a relationship exists between consumers' post-purchase experience and subsequent price-sensitivity, and whether before or after, purchase experience will affect price sensitivity [Hseih, 2004]. Singh emphasizes that consumer behavioral intentions are nevertheless influenced by a heightened awareness of specific drugs. Consumers feel empowered by the information provided in direct-to-consumer advertising and they are concerned about governmental attempts to regulate prescription drug advertising (Singh T and Smith D, 2005).

2.4 Subjective Norms And Word Of Mouth Influence

In our daily life we come across different advertising campaigns but in most of the cases we use to ignore them. Few advertisement get memorized as we are attracted towards them and they match our needs.

The communications from friends, relatives, family members have more credibility than advertisers can even imagine (Pusateri, 1999). Word of mouth shared an honest opinion about products or services between two or more people who may be friends, relatives, family members or peer group (Balter, 2004). With the latest Euro-barometer survey showing that 58% of Europeans do not trust corporate, relying more on relatives and friends credibility, honesty and impartially on purchase decision making for a product which will continue to grow (Harris, 2004). A study on the consumer in Islamabad & Rawalpindi showed that the buying decisions of people are better made when they talk to their family, friends or acquaintances regarding a purchased item (Saad, 2011). The study showed that close relatives, friends, family, and acquaintances always provide an honest opinion which is

completely reliable and helps to make the decision easier, whereas the intuitive decision making can be very risky. Therefore for a rational decision consumer prefer to consult knowledgeable people around them (Saad , 2011). This helps as a powerful persuasive force, particularly in the diffusion of information about a product with which the consumer is not familiar enough (Dean and Lang, 2008). Katz and Lazarsfeld (1995) found that a positive word of mouth communication from friends, relatives, the family is seven times more effective than newspaper and magazine advertising, four times more effective than personal selling and twice as effective as radio advertising in influencing consumers to switch brands. In recent years, online social networking has emerged as a strong component of social interaction. People share an enthusiasm for a specific product through blogs, bulletins, the community created in the web pages, social networking sites like instagram, facebook, twitter, youtube and linkedin etc. This entire virtual world has a tremendous influence in the consumer decision-making process *(*Kotler and Armstrong, 2010). These communities are fluid and flexible and may be based on a wide range of cultural interests and social affiliations. The new social networking technologies offer a genuine communication channel that is much more credible than any advertising company (Anya, 2006). Research estimates that while 90% of conversations regarding product purchase decision-making process take place offline (Keller and Berry, 2006), just 15% of consumers account for one third of WOM conversations in America, and those ‒Conversation Catalysts‖ rely heavily on the Internet as a resource for the information they pass along to their family and friends (Keller and Fay, 2006).

According to Saad (2009) some people simply answered that they get opinionated easily so they don't mind the information. Also, because those who have already experienced the product/service have authentic knowledge about it, therefore one should make use of others experience. The study concludes that close relatives, friends, family and acquaintances

always provide an honest opinion that is completely reliable and helps make the decision easier, they feel that intuitive decision making can be very risky therefore for a rational decision they consult knowledgeable people around them. Another reason the study showed that the first-hand experience of others can be very helpful because it has some truth to it and can be easily trusted. A great deal of reliance on the guidance and advice of close friends, relatives and acquaintances has been observed (Rebecca, 2007). This is because of the degree of accuracy and sincerity assigned to their point of view.

2.5 Perceived Behavioral Control

To understand the motivation of individuals, researchers have found there are expectations as well as values or beliefs that affect their subsequent behavior. Based on which John William Atkinson developed the expectancy-value theory in the 1950s and 1960s. According to the theory individual achievement and achievement, related choices are most proximally determined by two factors (Eccles, J, 1983). One is expectancies for success, and others are subjective task values. Expectancies refer to how confident an individual is in his or her ability to succeed in a task whereas task values refer to how important, useful, or enjoyable the individual perceives the task. However empirical work suggests that demographic characteristics, stereotypes, prior experiences, and perceptions of others' beliefs and behaviors affect achievement-related outcomes indirectly through these expectancies and values (Nagengast, 2011).

The purpose of the expectancy-value theory was to explain and predict an individual's attitudes toward objects and actions. Attitude (toward an object or an action) is determined by expectations or beliefs concerning attributes of the object or action and evaluations of those attributes. This expectancy-value conceptualization has been applied extensively in

psychology in many areas, including learning theories, attitude theories, and decision-making theories (Rotter, 1954; Rosenberg, 1956; Edwards, 1954).

However, the attitude behavioral scale shows that there is no necessary relation between beliefs in the existence of an object and the attitude toward that object. This finding was contrary to most social psychological theory since beliefs had traditionally been viewed as a part of attitude (Fishbein & Raven, 1962). It, therefore, became necessary to not only distinguish between beliefs in the existence of an object and beliefs about an object but also to better understand the relations among beliefs about an object and the attitude toward that object. Fishben found that by conceptualizing a belief system as a habit-family-hierarchy of responses and by relying on notions of mediated generalization, relations among beliefs and attitudes without having to incorporate a need or drive for consistency(Fishbein, 1963). Based on this in the late 1970s and early 1980s, Fishbein and Ajzen expanded expectancy-value theory into the Theory of Reasoned Action (TRA). Theory of Reasoned Action aims to explain the relationship between attitudes and behaviors within human action. It is mainly used to predict how individuals will behave based on their pre-existing attitudes and behavioral intentions. An individual's decision to engage in a particular behavior is based on the outcomes the individual expects will come as a result of performing the behavior. The development and testing of Theory of Reasoned action were predicated on the assumption that behavior being studied are under full volitional control the extension of the model as proposed by Ajzen, the Theory of Planned Behavior explicitly incorporate perceived behavioral control as an antecedent to behavioral intention (Madden and Ajzen, 1992). The theory of planned behavior extends the boundary condition of pure volitional control specified by the theory of reasoned action which is accomplished by including the belief regarding the procession of requisite resources and opportunities for performing the behavior.

The more resources and opportunities individual think they possess greater will be the perceived behavioral control over the behavior.

In the Theory of Planned Behaviour, perceived behavioral control which was included as an exogenous variable, has direct effect as well as an indirect effect on the behavior through intentions. The indirect effect is based on the assumption the PBC has motivational implications for behavioral intention. When people believe they have little control over performing the behavior because of the lack of requisite resources, and then the intention to perform the behavior may be low even they have favorable attitudes and subjective norms concerning the performance of the behavior. The structural link between perceived behavioral control towards intention reflects the motivational influence to control behavior through intention (Shepherd, 1995). Among the components of TPB, PBC is the most complicated factor. According to Ajzen, PBC identifies presence or absence of requisite resources and opportunities to utilize those resources (Ajzen and Madden 1986) to engage in a particular behaviour. In broad terms, PBC as a construct includes dimensions of facilitating conditions for performing the behaviour, that reflect situational enablers or constraints to particular behaviour (Venkatesh 2000). The concept of PBC was expanded in Taylor and Todd‘s (1995) _resource‘ facilitating conditions which shows control relates to an individual‘s perception of the availability of the knowledge, resources and opportunities required to perform a specific behaviour. On the basis of these secondary research thesis can adopted availability, accessibility and affordability as prominent factors under PBC.

2.6 Psychographic Factor:

Psychographics is being defined as the study of personality, values, attitudes, interests, and lifestyles (Senise, 2007) which mainly focuses on interests, activities and opinions (IAO) of the consumers. Hence psychographic variables can be interpreted as combinations of

demographic and psychological variables that impact a customer's attitude in an overall manner.

It is much more important to know what sort of a patient has a disease that what sort of disease a person has. This is the kind of thinking needs to have while dealing with the psychographic behavior of the consumer. (Pujari et.al.2016),

Before choosing an over the counter drug, consumer evaluates different available alternatives. During this process, various product attributes that the consumer associates with each product option, can be evaluated and its importance is determined. The evaluation of alternatives can either be very extensive at times and rather narrow and fast at others. Consumers can create different rules that help and facilitate their decision making and decreases the amount of information that they will process. The consumer narrows down the alternatives by the help of his or her heuristic rules. These rules can be of various natures and can represent different assumptions or mindsets.

They can be related to their personal beliefs about the over the counter drugs, how they associate the drug familiarity with its quality or performance, or how they interpret drug efficacy based on indications that they obtain from drug information available to them.

In some cases, the buying behavior can turn into a habit where the consumer does not need to put effort into making a decision. Such a buying habit can stem from a brand loyalty where the consumer feels strongly and positively about a certain brand, and thus, makes consciously a choice to buy drug of that particular brand.

One study on the use of generic OTC medicine showed a dramatic difference between adopters and non-adopters (Strutton and Pelton, 1992). The adapters (as opposed to non-adopters) rated medical experts (doctors and pharmacists), interpersonal sources (family, friends, personal experience) and outlet sources (packaging, salespeople, price) are as

significantly more important in influencing their decision to purchase generic over the counter medicines. Media sources were rated the least influential by both groups (Strutton and Pelton, 1992).

Leva Salmane-Kuļikovska (2014) study shows, a personal connection to the brand of medicine can be developed over time and reinforces the habitual buying behavior and makes the consumer less prone to switch to any other brand. For other consumers, the habitual buying behavior does often come from inertia when the consumer is reluctant to put effort into the decision making process. As a result, the consumer develops the behavior of buying a particular brand of medicine out of habit. Because there is not a strong personal connection to that particular medicine or the brand itself, the consumer is prone to switch to another brand. The reason for a change of brand can be the opportunity to easily buy another brand of medicine due to better availability or price.

Sometimes the expenditure on an advertisement on certain over the counter allopathic drugs as well as sales results can be compared to previous experience, or different amounts of money can be spent on advertisements in similar locations to measure variations in the sales results that each location generates. It is known that many consumers are unable to recall advertisements or promotional messages of the over the counter drugs that they have been exposed to. This does raise a concern for the marketer since there is a reason to assume that the consumer may not remember the drugs or the advertised message at the point of purchase. However, the influence on the buying behavior of a consumer that can recall an advertisement or promotional activities is not positive in every case. Consumers tend to not only remember advertisements that they like about that medicine, but also raise strong emotions or that communicate a message that they believe in, but also advertisements that do the opposite.

Although demographic variables have received some exposure in the context of attitude toward the purchase of over the counter medicines in previous research, the literature review reveals a lack of research on the effects of psychographic variables on attitude toward over the counter medicines. Factors that are related to activities, interests, and opinions of consumers are typically clustered together under the title of psychographic factors (Townsend, 1987). In traditional consumer research, psychographic variables have been found to exert significant influences on different consumption activities (Townsend, 1987). Marketers have argued that activities, interests, and opinions are often more effective than demographics in understanding consumer behavior (Dutta and Youn,1999; Townsend, 1987; Wolberg and Pokrywczynski, 2001). A well-defined psychographic profile helps in developing a strategic message for the pharmaceutical companies dealing with over the counter drugs. The psychographic variables included here are safety profile of the medicines, efficacy, previous successful result, useful for curing minor problems, good quality medicines at a lower price, curing minor ailments and faster relief. So, this study can be further extended to find out the effect of the variables mentioned above on building customers behavior towards over the counter allopathic medicines.

2.7 Branding and promotion

Products satisfy the need or want of a consumer. They are more than tangible objects. Todays‘ consumer view a brand as an important part of a product and branding becomes so strong that no products go unbranded from daily use groceries to medicines. Thus branding add value to the product. As brand help consumers to identify the products that benefits them with product quality and consistency.

In modern business environments, particularly for convenience products consumers are exposed to a proliferation of brand choice alternatives. According to Fisher (1985) states

–Marketers battling to keep competitors from grabbing off customers complain that there just doesn‘t seem to be as much brand loyalty around as there used to be. This complaint means that it is not easy to obtain and maintain consumers to track their purchase behaviour‖. Thus it is imperative that only knowledge about availability , resources and opportunities are not sufficient enough to understand purchase intention.

As Ajzen (2011) has opined, –there is no assumption in the TPB model that people carefully and systematically review all the available information before they form an intention to purchase‖. In line with social psychology research (Petty and Cacioppo, 1986; Carver and Scheier, 1998; Chaiken and Trope, 1999), Ajzen argued that the amount of information processing that people engage while making a purchase decision varies along a range. Hence it has been felt that the study on the importance of branding in addition to TPB model may help to understand the market sentiment to study the influence of branding which influences the consumer to purchase OTC allopathic analgesic topical medicine.

According to Hegner (2017) consumer translate their attitudes into desires, taking perceptions of social pressure and control it to account. Customer brand loyalty has been a major focus of strategic marketing planning (Kotler, 1984) as it is an important basis in developing a sustainable competitive advantage – an advantage that can be realized through marketing efforts (Dick and Basu, 1994). Wilkie (1994) has defined brand loyalty as –a favorable attitude toward and consistent purchase of a particular brand‖. Kahn(1986) has opined that academic research on loyalty has largely focused on measurement issues and correlates loyalty with consumer characteristics. If consumers are satisfied with the brand they are using, their satisfaction is reinforcing and leads to an increase in the probability of choosing the same brand even after the promotion is withdrawn, (Kahn and Louie, 1990; Rothschild and Gaidis, 1981). However, by such definition it is difficult to correlate brand loyalty with behavioural intention. Consumers are brand loyal when both attitude and behavior are in their

favors. However, it does not clarify the intensity of brand loyalty, because it prevents the possibility that a consumer‘s attitude is unfavorable, while he/she repeats the purchase (Hegner, 2017). In such case, the consumer‘s brand loyalty would be unrealistic.

According to Batra et al. (2012) the influence of brands is so effective in consumer purchase decision making process that the strength of an attitude is logically associated with brand. As an attitude results in more frequent thinking and talking about the brand. Even subjective norms reflect consumer perceptions of whether the feeling of love for a brand is accepted, encouraged or implemented by the consumer‘s circle of influence. The consumers select brands they believe members of their reference or aspiration group would choose (Karjaluoto et al. 2016). Brands are able to elicit greater brand loyalty when they are able to satisfy consumers‘ social needs (Vernuccio et al., 2015).

2.8 Research Gaps

Based on the review of literature, research gaps have been identified where limited research studies have been done on the following areas:

- The majority of the studies have been done regarding efficacy, generic medicines, consumer awareness etc. of prescribed medicines.
- Limited studies have been identified on consumer behavior for allopathic over the counter medicines for analgesic segments in the Indian context.
- There are certain studies globally on over the counter medicines. But results and findings of these global studies will be different from Indian scenario due to the different socio-economic and cultural structures.

- Limited studies that exist on Indian context on over the counter medicines are general studies about consumer behavior. There are no theoretical approaches or significant implications or testing of any consumer behavior models in those studies.
- Theory of Planned Behaviour has been successfully implemented to understand consumer behavior in AIDS control activity, smoking behavior, social power, condom usage, counterfeit drugs in developing countries. But the implication or testing of the model has not been observed in understanding consumer behavior for over the counter medicines.
- Though there are studies on the influence of branding and promotion on general medicine globally but those studies cannot be directly considered. Because the marketing, promotion, branding of OTC allopathic analgesic topical medicine is completely different from general medicine under Indian context.

2.9 Theoretical background :

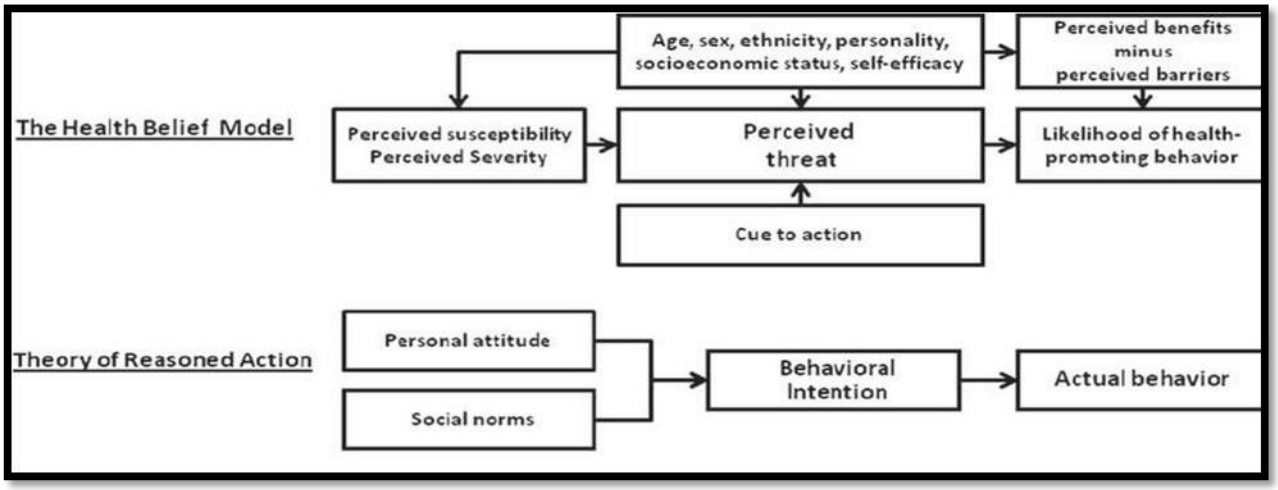
Even though the demand of over the counter allopathic medicines is ever increasing but the theoretical reasons have not been analyzed under the Indian scenario. So the study of consumer involvement has significance because consumers' information search during over the counter medicine purchases is a function of their involvement in the purchase decision.

Active information-seeking behavior—such as consulting people sources of information when labeled information is not clear or when conditions are present that complicate safe and effective medicine use is more likely among consumers who are involved in their over the counter medicine purchases. Also, the greater the involvement, the greater the likelihood that consumers will seek expert people sources of information instead of people sources of information. The extent of involvement may not only dictate the search for information but

also determine to what extent consumers are willing to purchase over the counter medicines. Thus, highly involved consumers are more likely to search for information and also understand the importance of over the counter medicines for curing their ailments.

As the intention is a predictor of actual behaviors, most contemporary theories of human social behaviors utilize intention as an important construct to examine factors that lead to the formation of intention (Ajzen & Fishbein, 2005). Well-known value-expectancy models include the health belief model (Becker et al., 1977). Health Belief Model (HBM) and Theory of Reasoned Action (TRA) were successfully used in the prediction of behavior and intention in a wide range of topics. HBM and TRA were used in predicting behaviors such as dieting (Nejad,2005) and use of seat belts (Simsekoglu, 2008). From Nejad study it was derived that in predicting the proportion of the variance in dieting and fasting both the models were successful. However, the variance explained in fasting increased when intention was added to the HBM model. Whereas attitude was the strongest predictors of behavioral intention and intention was the strongest predictor for dieting and fasting for Theory of Planned Behaviour and modified Health Behaviour Model (Nejad, 2005). Some studies have also been conducted to examine the separate application of each of these two models, such as consumption of milk (Brewer, 2011), oil (Thompson, 2009) and salt(Shepherd, 2008).

Fig 2.2 : Graphical Representations Of The Health Belief Model And The Theory Of Reasoned Action.



(Source: Saunders and Wallhagen, American Journal of Audiology 21(2):331-7 2012)

The theory of reasoned action was first developed by Fishbein and Ajzen (1975). Later, Ajzen (1991) extended the model to develop the theory of planned behavior by adding the perceived behavioral control to the model to improve its applicability in partial volitional behaviors. In the latest version of the two theories, Fishbein and Ajzen (2010) renamed the model as reasoned action model. The authors emphasized the addition of the moderating effect of skills, abilities, and environmental factors on the relationship between intention and behavior. The reasoned action model integrates attitude components into a structure that helps explain and predict intention and behavior in a better way.

Prescriptive Cognitive Models were first developed in the 1960s when marketing researchers increasingly focused on beliefs and attitudes as determinants of consumer buying behavior (Ahtola 1975). The most influential work in this area was forwarded by Martin Fishbein who proposed a model of attitude formation that became known as the _Fishbein model'; the first of a breed of _expectancy-value' models (Fishbein 1963, Fishbein 1965, Fishbein 1967, Fishbein and Bertram 1962). The Fishbein model proposed that a person‘s overall attitude toward an object is derived from his beliefs and feelings about various attributes of the object

(Ahtola 1975, Loudon and Della Bitta 1993). The model is expressed algebraically in Figure 1.6 below.

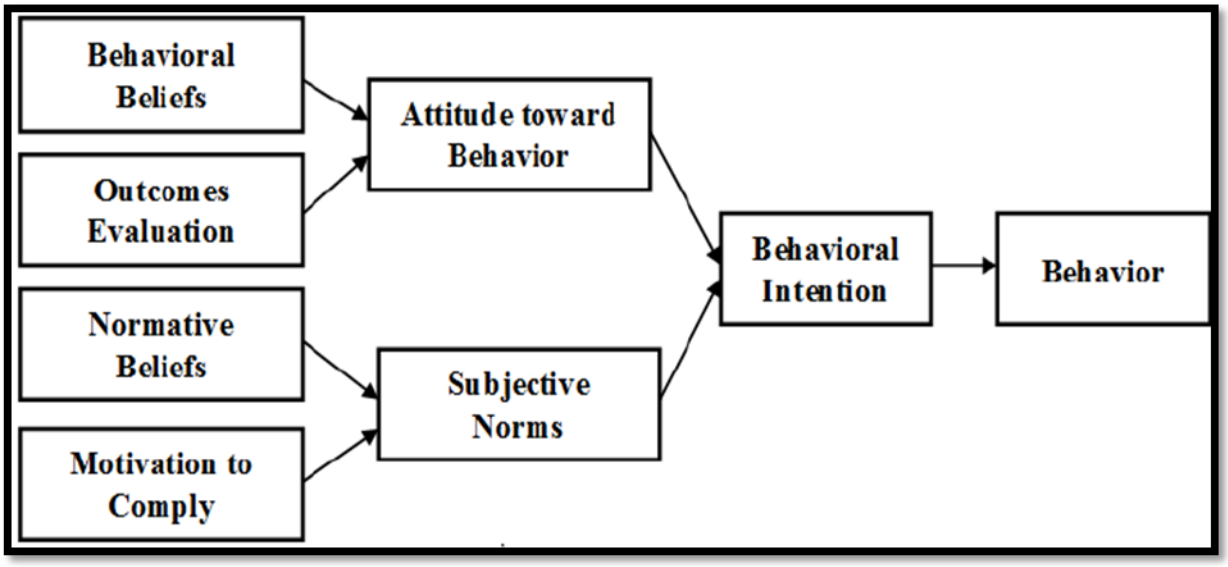
Fishbein Model expressed algebraically as: Ao=ΣBiai I=1

Where: Ao= the person‘s overall attitude towards object _o‘, Bi = the strength of belief that the product possesses attribute _I‘, Ai = the evaluation or intensity of feeling (liking or disliking) toward attribute _I‘, N = the number of relevant beliefs considered by that person.

Source: (Ahtola 1975, Loudon AND Della Bitta 1993, Solomon, Bamossy et al. 2006)

While this model provided a significant contribution in the area, it was developed further, and significantly extended, to not only assess attitudes but behavior (Ajzen and Fishbein 1980, Fishbein and Ajzen 1975). This revised model became known as the Theory of Reasoned Action (TRA) and is depicted in Figure below.

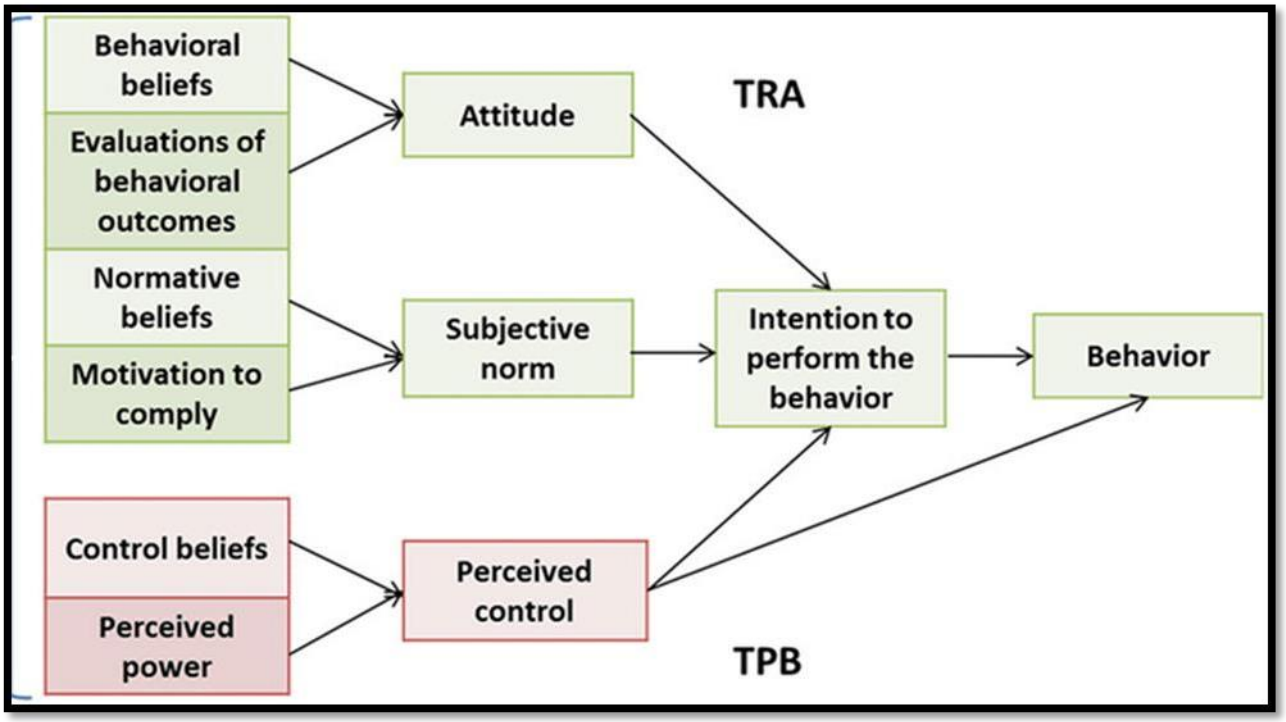
Figure 2.3: Theory of Reasoned Action



(Source: https://www.researchgate.net/figure/Theory-of-Reasoned-Action-TRA-Fishbein-Ajzen-1975)

The model and its predecessor, the theory of planned behavior, are the most powerful and common cognitive models of attitude-behavior relationship in consumer behavior (Ajzen, 2008). Briefly, attitude toward a given behavior is dealt with the evaluation of the likely consequences of the behavior. Subjective norm reflects the likely approval or disapproval of behavior by the subject's friends, relatives, professional people. Perceived behavioral control deals with the presence or absence of factors that make the behavior easier or more difficult to perform. Furthermore, attitudes, subjective norms, and perceived behavioral control are shown to be related to a set of salient behavioral, normative, and control beliefs about the behavior. Although connected directly to attitude, salient beliefs are not considered as antecedents to attitude. That is because the summed product of behavioral, normative, and control beliefs captures the underlying determinants of attitude, subjective norm, and perceived behavior control constructs (Ajzen, 2008). This conceptualization is useful for exploring the correlations of different salient beliefs with intention and behavior. It helps gain insight into the hidden cognitive foundation to explain certain attitudes, subjective norms, and perceptions of behavioral control (Fishbein & Ajzen, 2010). Lastly, various background factors influence behavioral, normative, and control beliefs. The theory of reasoned action and theory of planned behavior, which focuses on the constructs of attitude, subjective norm, and perceived control, explain a large proportion of the variance in behavioral intention and predict several different behaviors, including health behaviors (Montaño and Kasprzyk 2008).

Figure 2.4: The Theory Of Reasoned Action and Planned Behavior.



(Source: https://www.researchgate.net/figure)

Evidence comes from hundreds of studies that have been summarized in several meta-analyses and reviews (Armitage and Conner, 2001; Albarracin, Johnson, Fishbein, and Muellerleile, 2001; Albarracin and others, 2003; Albarracin, Kumkale, and Johnson, 2004; Albarracin and others, 2005; Downs and Hausenblas, 2005; Durantini and others, 2006; Hardeman and others, 2002; Sheeran and Taylor, 1999; Webb and Sheeran, 2006). The theory of reason action and theory of planned behavior have been well supported by empirical evidence. Attitudes toward the behavior, subjective norms and perceived behavioral control can predict intention toward behaviors with high accuracy. The intention, together with perceptions of behavioral control, accounts for considerable variance in actual behavior. Several studies have used reasoned action model to predict different intention and behaviors, including health-related behaviors (Godin & Kok, 1996; Armitage & Conner, 2001) and

behaviors associated with using various medical or pharmaceutical products in adults (Edwards et al., 2001; Farmer, Kinmonth, & Sutton, 2006; Legare, Godin, Dodin, Turcot, & Lapierre, 2003; Rise, Astrom, & Sutton, 1998). Furthermore, theory of planned behavior has been successfully used to predict parents‘ intention and behavior toward giving healthy or unhealthy products to their children, such as limiting frequency of infants' sugar intake (Beale & Manstead, 1991), using oral rehydration products (Hounsa, Godin, Alihonou, Valois, & Girard, 1993), not smoking in-door in the presence of children (Moan, Rise, & Andersen, 2005), vaccination (Askelson et al., 2010), and starting supplemental feeding to children (Hamilton, Daniels, White, Murray, & Walsh, 2011). Within the domain of consumer behavior, several studies adopted the reasoned action approach to build research models. For instance, the works of Oliver and Berger (1979) on swine flu vaccination, Moorman and Erika (1993) on preventive health behaviors were based on the theory of reasoned action. Other studies that utilized the theory of planned behavior included Luce and Barbara's (1999) study on medical testing and Lodorfos, Mulvana, and Temperley‘s (2006) study on the over-the-counter brand choice decision. However, according to the knowledge of the author of this paper, there were limited studies in the domain of understanding consumer behavior over the counter allopathic medicines by using the theory of planned behavior under Indian context have been explored yet.

2.10 Conceptual framework

Decision making process of consumer always remains an interesting topic in the mind of the researchers. 300 years ago Nicholas Bernoulli, John von Neumann and Oskar Morgenstern, started to examine the basic of consumer decision making (Richarme 2007). Previously the consumer purchase decision making process was determined from economic perspective. On

the basis of which _Utility Theory‘ was developed. According to the theory, consumers who were considered as rational decision maker, make choices based on the expected outcomes of their decisions (Schiffman and Kanuk 2007, Zinkhan 1992).

Further research on consumer behavior showed a wide range which influenced consumer behavior. They were need recognition, information search, evaluation of alternatives, the building of purchase intention, the act of purchasing and finally consumption (Bray, 2009). With the evolution, the concept of consumer behavior was developed in 1950s‘to encompass the more holistic range of activities that impact upon the consumer decision (Blackwell, Miniard et al. 2001).

Different theoretical approaches have been adopted to understand decision making process of different traditions of psychology. The major approaches that had emerged

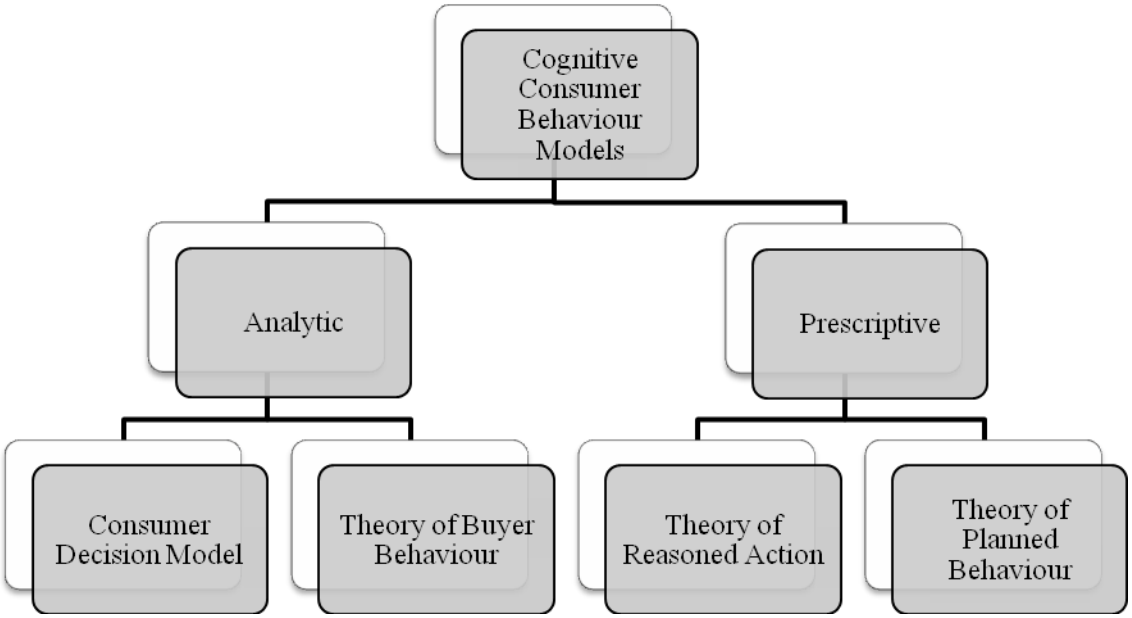
- Economic Man : According to this approach human being was considered as rational , interested and made decision based upon ability to maximize utility expending minimum effort. The term _economic man‘ or _Homo economicus‘ (Persky 1995) was first used in the late 19th century (Persky 1995) .
- Psychodynamic: Sigmund Freud (1856-1939) attributed the Psychodynamic approach. According to Sigmund _behaviour‘ is subject to biological influence through _instinctive forces‘ or _drives‘ which act outside of conscious thought (Arnold, Robertson et al. 1991). While Freud identified three facets of the psyche, namely the Id, the Ego and the Superego (Freud 1923)
- Behaviourist: Ivan Pavlov was the most influential proponents of behavioral approach. According to this approach all things that organisms do, including actions, thoughts and feelings can be regarded as behavior. The causation of behavior is attributed to factors external to the individual (Bray, 2009).

- Cognitive : Cognitive approach was derived from cognitive psychology where its root back to early philosophers such as Socrates who was interested in origin of knowledge (Bray, 2009). The approach was based upon observed action to intrapersonal cognition. Cognitive approach explore and understand the mental structures and processes which mediate between stimulus and response (Kihlstrom 1987).

  2 types of cognitive models can be recognized. One is analytical model another is a prescriptive model. Through the analytical model, researchers showed the key elements that are supposed to explain the behavior of consumers. Researchers identified different influencing factors and intimate the relationships between factors in consumer decision making. These models follow five steps classification: problem recognition, information search, alternative evaluation, choice and outcome evaluation as the key stages in consumer decision processes (Erasmus, Boshoff et al. 2001, Schiffman and Kanuk 2007). The Theory of Buyer Behaviour (Howard and Sheth 1969) and the Consumer Decision Model (Blackwell, Miniard et al. 2001) were two of the most widely cited analytical models.

  Prescriptive models provide guidelines or frameworks to organize how consumers behave in structural way (Moital 2007). Through this model researchers measure which stimuli should be modified or emphasized to attract certain consumers responses. Most widely acclaimed and used prescriptive models were the theory of reasoned action (Fishbein and Ajzen 1975) and the theory of planned behaviour (Ajzen 1985).

Fig: 2.5 : Cognitive Consumer Behavior Models

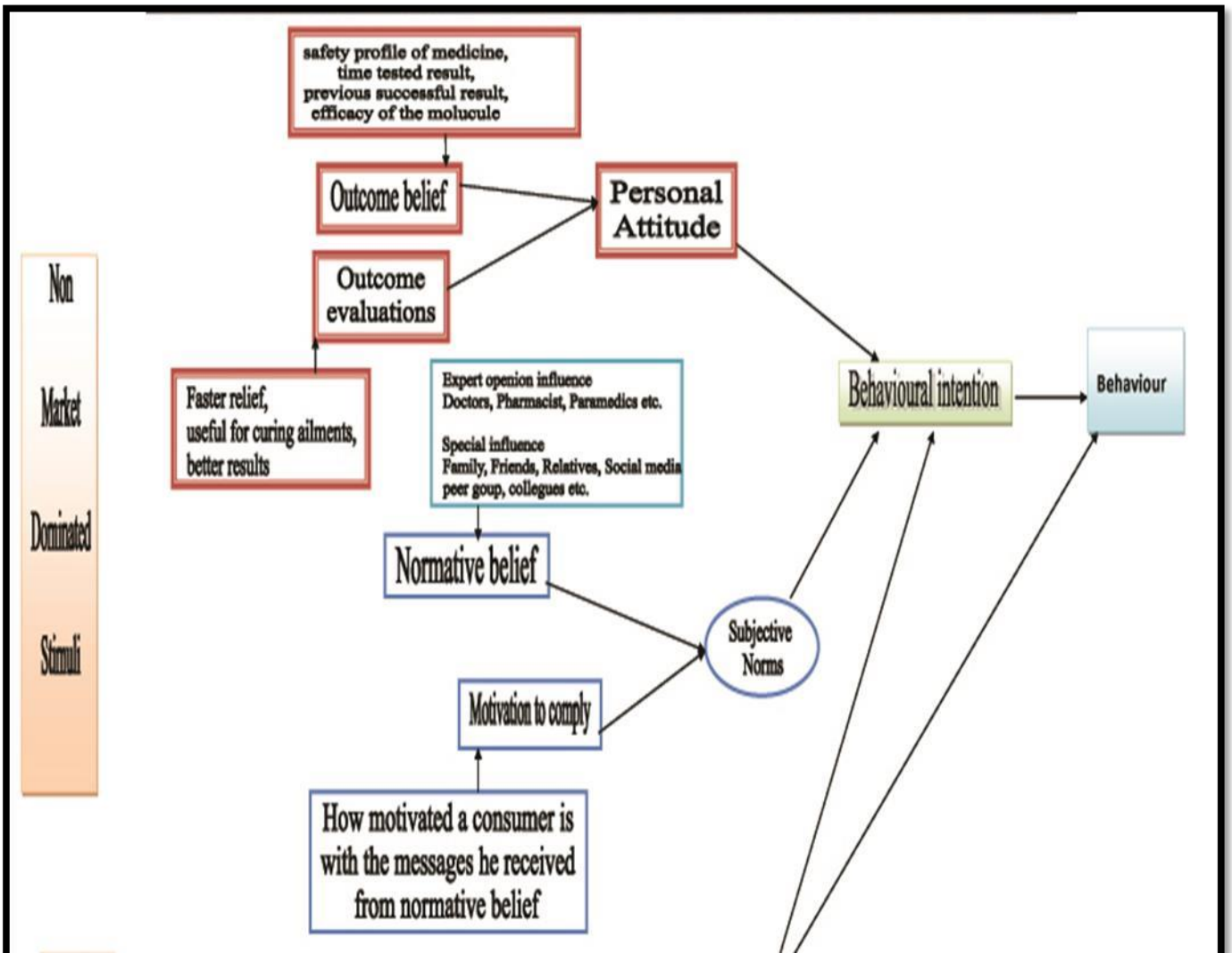


(Source: Adapted from Fawcett and Downs 1992, Moital 2007)

The theoretical constructs of theory of reasoned action and the theory of planned behavior focused on individual motivational factors as the determinants of the likelihood of performing a specific behavior. The behavioral intention was best predicted with the help of the theory of reasoned action which in turn is determined by attitude toward the behavior and social normative perceptions regarding it. The theory of planned behavior is an extension of the theory of reasoned action and includes an additional construct: perceived control over the performance of the behavior. In recent years, Fishbein and colleagues have further expanded TRA and TPB to include components from other major behavioral theories and have proposed use of an Integrated Behavioral Model (Montaño and Kasprzyk 2008). Although there are certain criticisms about the theory of reasoned action and theory of planned behavior, based on whether correlational results can explain behavior (Weinstein, 2007), many published intervention study reports show that changing constructs leads to subsequent change in behaviors (Albarracin and others, 2003, 2005; Jemmott, Jemmott, and Fong, 1992;

Kamb and others, 1998; Rhodes and others, 2007; Kalichman, 2007). TRA and TPB have been used successfully to predict and explain a wide range of health behaviors and intentions, including smoking, drinking, health services utilization, exercise, sun protection, breastfeeding, substance use, HIV/STD-prevention behaviors and use of contraceptives, mammography, safety helmets, and seatbelts (Albarracin, Fishbein, and Goldstein de Muchinik, 1997; Albarracin, Johnson, Fishbein, and Muellerleile, 2001; Bandawe and Foster, 1996; Bosompra, 2001; Bogart, Cecil, and Pinkerton, 2000; Fishbein, 1993; Montaño and Taplin, 1991; Morrison, Spencer, and Gillmore, 1998; Steen, Peay, and Owen, 1998; Trafimow, 1996). Findings have been used to develop many effective behavior change interventions (Fishbein, 1990; Fisher, Fisher, and Rye, 1995; Gastil, 2000; Hardeman and others, 2005; Jemmott, Jemmott, and Fong, 1992; Jemmott and Jemmott, 2000).

Fig2.6 :Path Model Developed From The Theory Of Reasoned Action And The Theory Of Planned Behaviour In Context Of OTC Medicine.



favorableness or unfavorableness toward performing the behavior. Many theorists have described attitude as composed of affective and cognitive dimensions (Triandis, 1988; Fishbein, 2007; French and others, 2005). Experiential attitude or affect (Fishbein, 2007) is the individual‘s emotional response to the idea of performing a recommended behavior. Individuals with a strong negative emotional response to the behavior are unlikely to perform it, whereas those with a strong positive emotional reaction are more likely to engage in it. Instrumental attitude is cognitively based, determined by beliefs about outcomes of behavioral performance, as in the TRA/TPB (Montaño and Kasprzyk 2008).

Secondly, it is the subjective norm that reflects the social pressure one feels to perform or not to perform a particular behavior. Fishbein (2007) indicates that subjective norm, as defined in TRA/TPB as an injunctive norm (normative beliefs about what others think one should do and motivation to comply), may not fully capture normative influence. Besides, perceptions about what others in one's social or personal networks are doing (descriptive norm) may also be an important part of normative influence. This captures the strong social identity in certain cultures which, according to some theorists, is an indicator of normative influence (Bagozzi and Lee, 2002; Triandis, 1980; Triandis and others, 1988).

Finally, Perceived behavioral control is one‘s perceived amount of control over behavioral performance, determined by one‘s perception of the degree to which various environmental factors make it easy versus difficult to carry out the behavior.

2.11 Summary

The relative importance of the three categories of theoretical constructs (attitude, subjective norms, perceived behavioral control) in determining behavioral intention may vary for different behaviors of consumers and for different populations and different geographical locations. For example, the intention to perform one behavior may be determined by attitude toward the behavior, while other behavioral intentions may be determined largely by normative belief. Similarly, the intention to perform a particular behavior may be primarily under attitudinal influence in one population, while more influenced by normative influence or personal agency in another population.(Kasprzyk, and Montaño, 2001) Thus, to design effective interventions to influence behavioral intentions, it is important first to determine the degree to which that intention is influenced by attitude, subjective norms, perceived behavioral control. Once this is identified for a particular behavior and population, an understanding of the determinants of those constructs can be confirmed.

CHAPTER-III

RESEARCH METHODOLOGY

3.1 Chapter III: Introduction

The research methodology adopted for this research is described in the following sub-sections: research flow, research design , research objectives , research hypotheses , area of study, sampling techniques, focus group discussions, pilot study, final survey questionnaire for respondents, reliability analysis, exploratory factor analysis are being explained.

3.2 Research Flow

Like any other research, this research also followed the systematical and sequential steps of analysis and field survey. The research objectives were formulated through an exhaustive review of the literatures to study past research work in that domain in order to understand their findings, limitations, gaps and directions for further research. Hypotheses were developed based on the objective of the research. In the next stage, research methodology was finalized which include the development of research instruments in terms of structured questionnaires.

3.3 Research Design

Research design is a planned and structural way of research investigation, inorder to obtain answers to research questions (Kothari, 2004). A research design functions as the research blueprint for measurement and analysis of data (Creswell, 2003). The purpose of this research design is to identify the factors influencing the consumer preferences to purchase allopathic over the counter medicines for analgesic segments. Therefore, the descriptive research design has been used as it is deemed to be the most appropriate. Various authors recommend the use of descriptive design (Orodho, 2004; Dane, 2000) to produce information that is of interest to

marketers. Jackson (1994) contends that all research is partly descriptive in nature. The descriptive aspect of research defines and describes the research‘s who, what, when, where, why, and how, some of the questions raised in the study.

3.4 Research Objectives

Research objectives have been developed from research problem statements in chapter one and review of literature detailed in chapter two. The primary objective of this research was to examine the factors influencing consumer buying behavior with respect to OTC allopathic analgesic topical medicine. In order to support the primary objective specific secondary objectives have been developed. Through these specific secondary objectives, researcher try to understand consumer behavior dynamics, the role of the societal influence, expert opinion influence, marketer influence in the consumer decision making process.

The specific objectives can be further detailed as :

Objective 1	To examine the impact of attitude on the consumers decision-making process while purchasing OTC allopathic analgesic topical medicines.
Objective 2	To analyze the influence of social factors on the consumer decision-making process while purchasing OTC allopathic analgesic topical medicines.
Objective 3	To understand the impact of demographic factors on consumer decision making process while purchasing OTC allopathic analgesic topical medicine.
Objective 4	To evaluate how marketer influences the consumer decision making process with respect to purchase of OTC allopathic analgesic topical medicines.

3.5 Research Hypotheses

To achieve the objectives mentioned above a set of nine hypotheses have been formulated, which have been tested and conclusions are drawn based on the test results. The hypotheses are given below in

Hypothesis 1. Demography has an influence on intention of the consumer to purchase OTC allopathic analgesic topical medicines.

Hypothesis 2. Consumer expectation of favorable outcome belief for OTC allopathic analgesic topical medicines has relationship with personal attitude.

Hypothesis 3. A favorable outcome evaluation of OTC allopathic analgesic topical medicine has an influence on the personal attitude of the consumer.

Hypothesis 4. Personal attitude has an influence on intention of the consumer to purchase OTC allopathic analgesic topical medicine.

Hypothesis 5. Stronger normative belief leads to higher intention of the consumer to purchase OTC allopathic analgesic topical medicine.

Hypothesis 6. Stronger motivation to comply for OTC allopathic analgesic topical medicines leads to higher intention to purchase.

Hypothesis 7. Higher perceived behavioral control leads to a significant impact on intention to purchase OTC allopathic analgesic topical medicine.

Hypothesis 8. Perceived behavioral control is more dominant than attitude and subjective norms in determining behavioral intention.

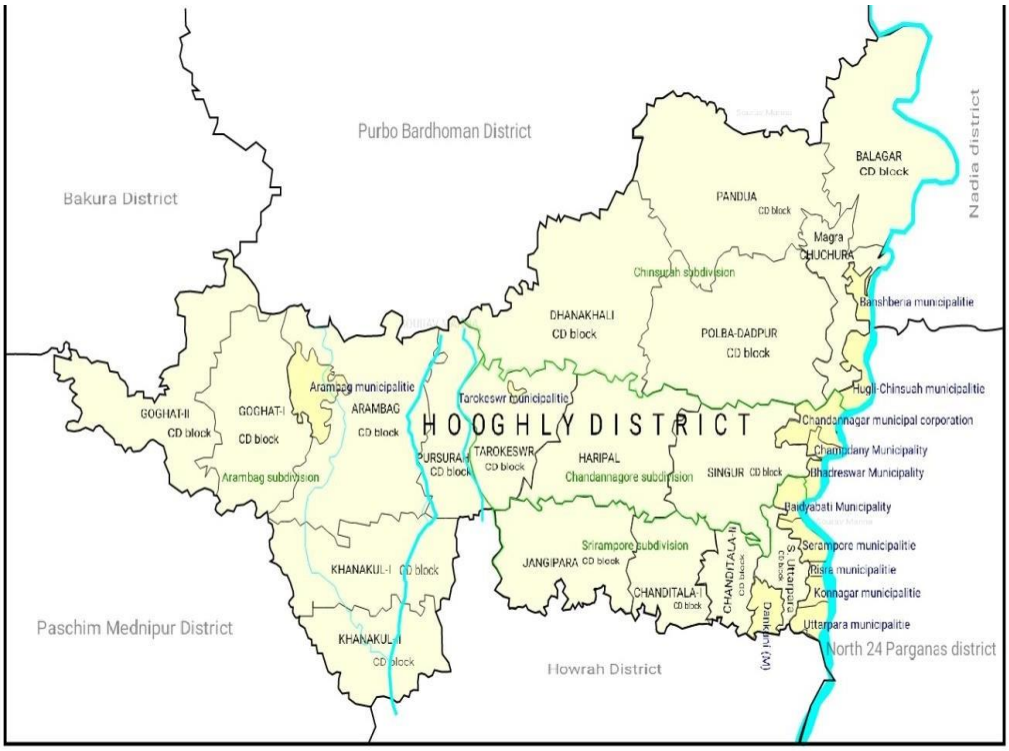
Hypothesis 9. Availability is a more dominant factor than any other factor in Perceived Behavioural Control.

Hypothesis 10. Purchase intention of consumer is determined by loyalty towards brand of OTC allopathic analgesic topical medicine.

3.6 Area Of Study

The target population for the study has been considered on the basis of demographic segmentation. Where the primary consideration was an age in the category of 18 years and above with a minimum educational qualification was of 12th standard. The reason behind this segmentation was to classify and segregate individuals who could exercise their knowledge and interpritate their understanding of OTC allopathic medicine into a consumable decision-making process.

Fig: 3.1 Map of Hooghly district showing blocks and municipal areas



(Source: https://en.wikipedia.org/wiki/Hooghly_districtTable 4.1)

Table 3.1.1 Census Details of Hooghly District Of West Bengal, India

Headquarters	Chinsura
Population	5520389 (as per census 2011)
Literacy	82.55%
The educated population of Hooghly Dist	4557081
Population density	1753/ sq Km
Sex ratio	958 (958 females per 1000 males)
Sub Divisions	Chinsurah, Chandannagar, Serampore, and Arambagh.
Municipalities	12
Gram Panchayat	210
Urban Population of Hooghly Dist.	2,128,499 (39%)
Rural Population of Hooghly Dist.	3,390,646 (61%)

(Source: Compiled from Databases Census 2011)

3.7 Sampling Techniques

The stratified random sampling method was based on literacy rate and density of population. The area of study was in Hooghly district in the state of West Bengal, since it has been found that it acts as an important center of business and is close to Kolkata. Accordingly, twelve

municipalities and twenty- gram panchayats has been selected for the study. Things that have been considered for this study are as follows:

Precision rate:5%

Confidence level: 95%

which are considered adequate for the study. The formula for determining the sample size (Kothari, 2004) is:

where,

$$n = z2 .p .q . N / e2 . (N – 1) + z2 .p . q$$

n = sample size

N = population size

z = standard variate at a given confidence level. The value of z for the confidence level of 95% is 1.96

e = precision or acceptable error. The value of _e' is taken as .05 for this study.

p = sample proportion and q = p -1

The most conservative sample size can be obtained by maximizing _n', and the sample will result in the desired precision. This is achieved if we take the value of q= 0.57. Sample size, considering p = 0.5 and the other values given above, is thus determined as follows:

Determined Sample Size (95% confidence level) is 376.

As consumption of OTC medicine is consider as a sensitive information for which sample size has been considered as 500 that even if there were response error also it will not go less than 376.

More over while determining the sample size as a function of the number of variables, the subjects-to-variable ratio has also been considered for the research (Beavers, Lounsbury, Richards, Huck, Skolits, & Esquivel,, 2013; Guadagnoli & Velicer 1988; Hogarty, Hines,

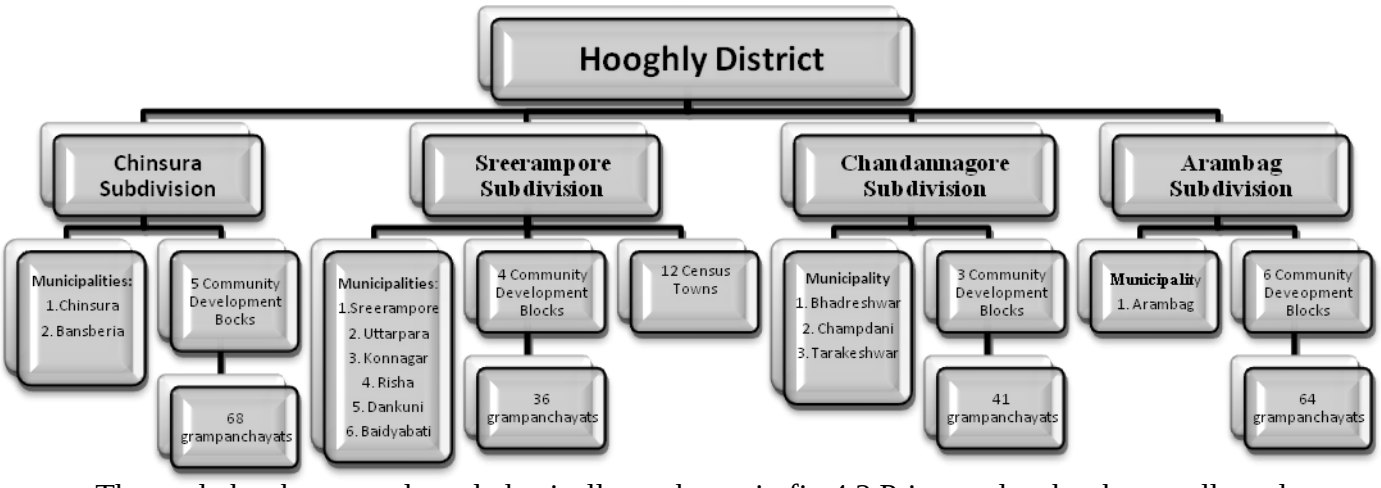
Kromrey, Ferron, & Mumford, 2005).As per the Costello and Osborne (2005) item: participant ratio of at least 1:10. In this research 54 items has been identified, on the basis of which sample size should be 540.

So considering the outcome of the confidence interval approach method and subject to variable ratio method the sample size has been determined as 500. As many researchers typically set a sample size level of about 500 to optimally estimate a single population parameter.

The feedback from the fifty nine respondents from the final survey has been rejected due to incomplete response which has been detected during rechecking.

The total sample size finally considered for analysis was 441.

Fig: 3.2 Hooghly district subdivisions, municipalities, Community development block, Panchayats.



The study has been conducted physically as shown in fig 4.2.Primary data has been collected from two different areas, urban and rural. In total four hundred and forty one data has been

finally selected for the rsearch analysis.Of this one seventy six has been considered fron urban areas and two hundered and sixty five from rural areas in the ratio of 3:2. According to census data 2011, the ratio has been found to be 3:2 considering the same pattern.

Table :3.1.2 Sample distribution pattern

Data considered from urban areas	176
Data considered from rural areas	265
Total	441

For Urban areas:

Samples has been collected from twelve municipalities:

- Customers of two shopping malls from two municipalities located in Sreerampore & Uttarpara.
- Customers of twenty three pharmaceutical retail shops from eight municipal areas(Konnagar, Rishra, Dankuni, Baidyabati, Bansberia.)
- Patients and their relatives from five doctors polyclinic located at Bhadreshwar, Tarakeshwar, Arambag.
- Four housing societies under Chandannagore municipal corporation and Chinsura municipalilty.
- Members of two local clubs in Bhaderashwar and Champdani municipalities.

For rural areas:

Samples has been collected from twenty gram panchayats:

- Customers from twelve pharmaceutical retail stores
- Customers from eight general stores.

- Anganwari workers community in Singur and Polba village.
- Kishan sabha of Chanditola, Khanaul, Ghoghat, Kamarkundu and Pursura gram panchayat
- One panchayat office of Harit.

3.8 Research Instrument

A structured questionnaire has been prepared by the researcher and personally administered to respondents to collect primary data. The questionnaire is the main research instrument. The questionnaire has been developed both in English and Bengali for a better understanding of the respondent. The questionnaire has been used as it is economical, convenient, structured and appropriate to capture primary data to test the hypotheses formed and to answer the research questions.

3.8.1 Focus Group Discussions

A focus group study has been conducted among the selected respondents in order to understand the consumer mindset for purchasing OTC allopathic analgesic topical medicines within a social context. The main purpose was to draw upon the attitude of the respondent and their feeling, belief, experience, the reaction in such a way which would not be feasible in any other method. A structured questionnaire was formed. The concept of OTC allopathic analgesic topical medicine was explained to the participants. To ensure homogeneity of the group and to use the experience of the respondents, the focus group was formed comprising of three doctors, three pharmacists, two sales executives dealing with OTC allopathic analgesic topical medicines, one psychologist and last member of the group is an expert in the domain of general and OTC allopathic analgesic topical medicines.

This has been enumerated in details in the table below.

Table 3.1.3 Participant details for focus group interview.

Sl. No	Participants	Qualifications	Professional back ground
1.	Respondent 1	MBBS	Attached with government block primary health centre in Hooghly district.
2.	Respondent 2	MBBS, MD (General med)	Attached with government sub-divisional hospital in Hooghly district.
3.	Respondent 3	MBBS, MD (Critical Care)	Attached with private nursing homes in Hooghly district.
4.	Respondent 4	B.Pharm	Pharmacist of the pharmaceutical shop.
5.	Respondent 5	B.Pharm	Pharmacist of the pharmaceutical shop
6.	Respondent 6	B.Pharm	Pharmacist of the pharmaceutical shop
7.	Respondent 7	MBA	Regional Manager of a Pharmaceutical Company
8.	Respondent 8	B.Sc	Area Manager of over the counter pharmaceutical company
9.	Respondent 9	MA	Psychologist
10.	Respondent 10	M.Sc (Nursing)	Faculty of nursing college.

Table 3.1.4 Points of discussion during the focus group interview

Sl. No	
1	Consumer expectation while purchasing allopathic OTC allopathic analgesic topical medicine
2	Consumer belief about OTC allopathic analgesic topical medicine
3	Reasons for purchasing OTC allopathic analgesic topical medicine
4	Different factors motivating in purchase of OTC allopathic analgesic topical medicine
5	How past experience influence consumer decision making while purchasing OTC allopathic analgesic topical medicine
6	Why OTC allopathic analgesic topical medicine in lieu of prescription generated medicines
7	Worried about the risk of using OTC allopathic analgesic topical medicine
8	Role of demographic factors in purchasing allopathic analgesic topical medicines

The objective was to obtain feedback from the participants, their considerations and ideas influenced the purchase decision-making process for purchasing analgesic allopathic OTC medicine.

The method is feasible in illuminating the variety of viewpoints held in a population. It is used as a single source of data or in combination with other methods. During the focus group interview, the respondent's response was recorded for further analysis of their feedback and developing the questionnaire for the pilot study.The analysis of the records obtained from the focus group interview revealed the undermentioned factors as shown in the table.

Table 3.1.5 Factors identified from the focus group interview

Sl. No.	Points of discussion during focus group interview	Factors identified from discussion
1.	Consumer expectation while purchasing OTC allopathic analgesic topical medicines	I Faster cure II Efficacy of the medicine . III The expectation for curing of minor ailments IV Immediate relief. V Minimum side effects VI Safe use of the drug
2.	Reasons for purchase & consumer believe about OTC allopathic analgesic topical medicines	I. Faster relief II. Consultation not required from doctors III. Safety profile IV. Availability V. OTC allopathic analgesic topical medicine medicines are economical VI. Peace of mind
3.	Other factors motivating the consumer to purchase	I. Availability II. Family influence or peer influence III. Brand recognition IV. Availability of brands V. Quality of brands VI. Family influence & socially acceptable VII. Advisement and promotion

		VIII. Escaping doctors‘ fees as well as time - saving. IX. Visibility X. Easy to use and no after usage affect. XI. Income of individual XII. Occupation of individual
4.	Why not a doctor Prescription.	I. Need based, depending on the severity of the a. disease. II. Awareness about common infected diseases III. Have to spend a long time in doctor chamber IV Doctor sometimes give an unnecessary prescription V. For non-chronic problems, OTC medicines give faster recovery.
5.	Past experience influence consumer decision making process	I. Satisfying results of past use motivates consumer . II. How it is working for other family members III. Time tested results IV. VI. From our childhood we have knowledge VII. Our parents made us use to for using OTC medicines.

6.	Worried about the risk of using OTC allopathic analgesic topical medicine	I. No such risk as per previous knowledge from past experience. II. Always have side effect but limited use its ok. III. Sometimes we overlook, but risk factors always persist. IV. Old age people or people who are already under medication. V. Mostly they are safe as huge population consumes them on a daily basis. VI. As OTC allopathic analgesic topical medicine are widely advertised they may have less threat. VI

After developing a thorough understanding of the consumer perception about purchasing behavior of OTC allopathic analgesic topical medicines, the next step is to generate statements/questions for the questionnaire for the pilot survey. In this step, content (from literature/theoretical framework) are transformed into statements, factors identified from the focus group interview are also undertaken for developing questions. In addition, a link among the objectives of the study and their translation into content is established. For example, the researcher has indicated what the questionnaire is measuring i.e, knowledge, attitudes, perceptions, opinions, recalling facts, behavior change, etc.

3.8.2 Pilot Survey

To assess the factors influencing the consumer behavior for purchasing over the counter allopathic medicines thirty respondents were chosen for the pilot study.The questioneer developed based on the objectives of the research were distributed among the respondents for

there feedback. Out of these thirty respondents fifteen were choosen from rural areas and rest from urban areas. The survey instrument used was a structured questionnaire prepared by the researcher.

The questionnaire consisted of ten sub-parts.

The first part of the questionnaire gives a brief introduction of the thesis and questions regarding demographic variables. The questions used in this section are the following:

a) Age of the respondent: close-ended question four classes.
b) Gender of the respondent: close-ended question two classes.
c) Educational qualification of the respondent: close-ended question four classes.
d) Occupation of the respondent: close-ended question six classes.
e) Monthly income of the respondent: close-ended question five classes.

The second part of the questionnaire was regarding consumer understanding and expenditure on OTC allopathic analgesic topicalmedicines. The questions used in this section are the following:

a) Usage of OTC allopathic analgesic topical medicine: close-ended question four classes
b) Name the OTC allopathic analgesic topical medicine or medicines last purchased: open ended question
c) Monthly expenditure on allopathic OTC medicine in household: close-ended question four classes
d) Members in household: close-ended question four classes
e) Consumption of pharmaceutical OTC allopathic analgesic topical medicine: close-ended question three classes
f) Frequently purchase and least purchase medicines in different ailments: Ranking orders

The third part of the questionnaire was regarding the availability of OTC allopathic analgesic topical medicines in analgesic segments. The questions used in this section are the following:

a) Availability of OTC medicine in comparison with prescription medicine: close-ended question three classes
b) Last purchased the OTC allopathic analgesic topical medicine: close-ended question three classes
c) If from a grocery store then why: close-ended question four classes
d) The last part of this segment collects the respondents' views on the unavailability of prescription medicine forced the consumer to purchase OTC allopathic analgesic topical medicine

actors are measured on a seven-point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The forth part of the questionnaire was regarding the influence of chemist and other paramedics in decision making process. The questions used in this section are the following:

a) With whom you feel more comfortable to discuss with related to medical advice at initial stage: close-ended question five classes
b) Pharmacist guided people to purchase medicine, what according to you are the possible reason people follow their advice: close ended question two classes

The fifth part of the questionnaire collects the respondents' views on doctors influence in purchasing over the counter medicine. The various factors are measured on a seven-point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring doctors influence in purchasing over the counter allopathic medicines are:

a) As there are no doctor available nearby so I have consumed OTC allopathic analgesic topical medicine
b) Due to longer waiting time for doctor I have to consume OTC allopathic analgesic topical medicine.
c) I have purchased OTC allopathic analgesic topical medicine from prior assumption of the doctor prescription.

The sixth part of the questionnaire collects the respondents‘ views on consumer awareness about OTC medicine in purchasing over the counter medicine. The various factors are measured on a seven-point Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA))

The various factors selected for measuring consumer awareness in purchasing over the counter allopathic medicines are:

a) I am aware of the usage information
b) I know the active ingredients of the medicine
c) I know the warning information about the medicine
d) When the problem is not eradicated I consume more than the recommended dosage.

The sixth part of the questionnaire collects the respondents‘ views on cost factors about OTC allopathic analgesic topical medicine in purchasing over the counter medicine. The various factors are measured on a seven points Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)

The various factors selected for measuring cost influence in purchasing over the counter allopathic medicines are:

a) The higher cost of remedy for medical advice makes me to go for OTC allopathic analgesic topical medicine.
b) There are wide varieties of OTC allopathic analgesic topical medicine of different costs for single therapy.
c) OTC allopathic analgesic topical medicines are cheaper than prescribed medicine.

The seventh part of the questionnaire collects the respondents‘ views on peer group influence for purchase decision making the process for purchasing over the counter medicine. The various factors are measured on a seven points Likert scale with the following details (1 = Very Strongly Disagree(VSD), 2=Strongly Disagree(SD) , 3=Disagree(D) , 4=Neither Agree Nor Disagree(NAD) , 5=Agree(A) , 6=Strongly Agree(SA) , 7=Very Strongly Agree(VSA)

The various factors selected for measuring peer group influence in purchasing over the counter allopathic medicines are:

a) Last time I purchase a brand of OTC allopathic analgesic topical medicine due to a recommendation from my friends & relatives.
b) My past experience helped me in purchasing OTC allopathic analgesic topical medicine last time.

The eighth part of the questionnaire collects the respondents‘ views on peer group influence for purchase decision making the process for purchasing over the counter medicine. The various factors are measured on a seven-point Likert scale with the following details (1 = Very Strongly Disagree(VSD),2=Strongly Disagree(SD), 3=Disagree(D), 4=Neither Agree Nor Disagree(NAD) , 5=Agree(A) , 6=Strongly Agree(SA) , 7=Very Strongly Agree(VSA)

The various factors selected for measuring branding and promotions influence in purchasing over the counter allopathic medicines are:

a) Due to the perceptional efficacy of the product
b) Due to the repeated advertisement, I used to see about the product
c) Due to the packaging of the product
d) Due to the wider availability of that particular brand
e) The advertisement of OTC medicines brand helped me to recall them during the time of purchase.
f) I have more trust on the brand than the molecule of an OTC medicine
g) I am ready to pay more on a well-known brand of OTC medicine.
h) I feel risky if I move for a lesser known OTC medicine brand as I am less familiar with the brand name.

The ninth part of the questionnaire collects the respondents‘ overall experience about using OTC medicinal products for the purchase decision-making process for purchasing over the counter medicine. The various factors are measured on a seven points Likert scale with the following details (1 = Very Strongly Disagree(VSD),2=Strongly Disagree(SD), 3=Disagree(D), 4=Neither Agree Nor Disagree(NAD) , 5=Agree(A) , 6=Strongly Agree(SA) , 7=Very Strongly Agree(VSA)

The last part of the questionnaire was regarding consumer satisfaction or dissatisfaction about the usage of over the counter allopathic medicine.

The intention of the pilot study was to test the respondents understanding the level of the questionnaire developed, to observe the time taken by the respondent to complete the survey and to understand the practical difficulty that respondents may face during final data collection process. Based on the suggestions of the respondents corrections were incorporated

the questionnaire was improved to collect data during the final survey with maximum factual accuracy.

3.8.3 Final Survey Questionnaire For Respondents

The changes made in the questionnaire are summarized below:

1. Based on the response received from the pilot survey some questions were reframed in some cases in order to link up with objective, hypothesis, selection of appropriate scales of measurement and redesigning questionnaire layout.
2. Certain wordings were changed as many respondents did not understand them. The questionnaire was thus modified to ensure the usage of simple words, which are more commonly used and better understood to common people.
3. The open-ended question that was used for understanding the possible reasons for satisfaction or dissatisfaction has been modified to close ended question. This was done as some respondents

   were unsure as to how their response should be in the questionnaire. This ensured that any such ambiguity was removed from the final questionnaire.

4. Some questions were club to-gather under one set of the question by using seven points Likert scale to match with the format of other items in the questionnaire.

Following things have been reconfirmed before rolling out the final questionnaire:

Table 3.1.6 Questionnaire Checklist

➢ Does the instrument look like a questionnaire?	Yes
➢ Does it represent the content?	Yes
➢ Is it appropriate for the sample/population?	Yes
➢ Is the questionnaire comprehensive enough to collect all the information needed to address the purpose and goals of the study?	Yes

3.8.4 Indexing Of The Variables Used In The Study Concerning The Factors Used In The Questionnaire

Table 3.1.7 List of Variables Considered

Variables (used in the study) contributing to the consumer preferences for allopathic OTC allopathic analgesic topical medicine

Demographic Profile

Variable	Description
V1	Age
V2	Gender
V3	Educational qualification
V4	Occupation
V5	Income (monthly)
V6	Number of members in the household
Consumer Outcome Belief about OTC allopathic analgesic topical medicine	
V7	I purchase allopathic OTC allopathic analgesic topical medicine due to previous successful results.
V8	I am concern about the safety profile of the allopathic OTC allopathic analgesic topical medicine
V9	I belief allopathic OTC allopathic analgesic topical medicine have efficacy as I desire.
V10	My past experience of allopathic OTC allopathic analgesic topical medicine plays a role in the purchase decision-making process
V11	I would describe my thoughts & feelings towards allopathic OTC allopathic analgesic topical medicine as ambivalent

Consumer Outcome Evaluation of OTC allopathic analgesic topical medicine	
V 12	OTC allopathic analgesic topical medicines provide **quick** relief in curing my **minor health problems**.
V 13	OTC allopathic analgesic topical medicines provide **quick** relief in curing my **major health problems**.
V 14	OTC allopathic analgesic topical medicine allopathic medicines provide **quick** relief in curing my **chronic health problems.**
V 15	OTC allopathic analgesic topical me declines provide **complete** relief in curing my **minor health problems.**
V 16	OTC allopathic analgesic topical medicines provide **complete** relief in curing my **major health problems.**
V 17	OTC allopathic analgesic topical medicines provide **complete** relief in curing my **chronic health problems.**
V 18	OTC allopathic analgesic topical medicines provide **temporary** relief in curing **my minor health problems.**
V 19	OTC allopathic analgesic topical medicines provide **temporary** relief in curing my **major health problems.**
V 20	OTC allopathic analgesic topical medicines provide **temporary** relief in curing **my chronic health problems.**
V 21	OTC allopathic analgesic topical medicines provide **no** relief in curing **my minor health problems.**
V 22	OTC allopathic analgesic topical medicines provide **no** relief in curing **my major health problems**.
V 23	OTC allopathic analgesic topical medicines provide **no** relief in curing **my chronic health problems.**

Consumer Normative belief about OTC allopathic analgesic topical medicine	
V24	The idea of purchasing allopathic OTC medicine is supported by my parents
V25	The idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my relatives
V26	The idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my friends
V27	The idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my colleagues
V28	The idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my networks on social media i.e Facebook, Twitter etc
V29	The idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by the local pharmacist
Consumer Motivation to comply with OTC allopathic analgesic topical medicine	
V30	Suggestions received from parents with regards to OTC allopathic analgesic topical medicine.
V31	Suggestions received from relatives with regards to OTC allopathic analgesic topical medicine.
V32	Suggestions received from friends with regards to OTC allopathic analgesic topical medicine.
V33	Suggestions received from the network of social media with regards to OTC allopathic analgesic topical medicine.

V34	Suggestions received from a local pharmacist with regards to OTC allopathic analgesic topical medicine.
Consumer perceived behavioural control about OTC allopathic analgesic topical medicine	
V35	Availability of medicine
V36	Non availability of allopathic prescription medicine may cause me to buy OTC allopathic analgesic topical medicine
V37	One of the reasons for buying OTC allopathic analgesic topical medicines is that prescription medicines are not always accessible.
V38	Purchasing of OTC allopathic analgesic topical medicine wouldn‘t be an option if prescription allopathic medicines are accessible.
V39	If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from grocery store
V40	If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Pharmaceutical store
V41	If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from general store.
V42	If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from the shopping mall
V43	If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Online order
V44	The affordability of OTC medicine is completely under my control

V45	The higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicines
V46	There are wide varieties of OTC medicines of different cost for single therapy
V47	OTC allopathic analgesic topical medicines are cheaper than prescribed medicine
V48	Good quality OTC allopathic analgesic topical medicines at lower price motivate me to purchase.

The linkage between objectives, hypotheses, and final survey questionnaires were shown below.

Objective	**Hypothesis based on objective**	**Questionnaire Question No**
To examine the impact of attitude on the consumers decision-making process while purchasing OTC allopathic analgesic topical medicines.	**Hypothesis 2**. Consumer expectation of favorable outcome belief for OTC allopathic medicine has relationship with personal attitude. **Hypothesis 3**. A favorable outcome evaluation of OTC allopathic medicine has an influence on the personal attitude of the consumer.	Consumer understanding of OTC allopathic analgesic topical medicine Question No. 7 and 8 **Outcome Belief** Question No. 9 **Outcome Evaluation** Question No. 10

	Hypothesis 4. Personal attitude has an influence on intention of the consumer to purchase OTC allopathic medicine.	
To analyze the influence of social factors on the consumer decision-making process while purchasing OTC allopathic analgesic topical medicines.	**Hypothesis 5**. Stronger normative belief leads to higher intention of the consumer to purchase OTC allopathic medicine. **Hypothesis 6**. Stronger motivation to comply for OTC medicines leads to higher intention to purchase.	**Subjective Norm** Question No. 11 **Motivation to Comply** Question No. 12
To understand the impact of demographic factors on consumer decision making process while purchasing OTC allopathic analgesic topical medicine.	**Hypothesis 1.** Demography has an influence on intention of the consumer to purchase OTC allopathic medicine.	**Demographic factors** Question No. 1 to 6
To evaluate how marketer influences the consumer decision making process with respect to purchase of OTC allopathic analgesic topical	**Hypothesis 7**. Higher perceived behavioral control leads to a significant impact	**Perceived Behavioural Control** **Availability**

medicines.	on intention to purchase OTC allopathic medicine. **Hypothesis 8**. Perceived behavioral control is more dominant than attitude and subjective norms in determining behavioral intention. **Hypothesis 9.** Availability is a more dominant factor than any other factor in Perceived Behavioural Control. **Hypothesis 10**. Purchase intention of consumer is determined by loyalty towards brand of OTC allopathic analgesic topical medicine.	Question 13 and 14 **Accessibility** Question 15 and 16 **Affordability** Question 17 and 18 **Motivational Factors** Question 19 **Behavioural Intention** Question 20 and 21

3.9 Reliability Analysis

The factors that emerged in the questionnaire for the collection of responses were tested for internal reliability using Cronbach‘s alpha which indicates the average inter-item correlation within each of the factors. Cronbach‘s alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is considered to be a measure of scale

reliability. A "high" value for alpha does not imply that the measure is uni dimensional. If, in addition to measuring internal consistency, in order to provide evidence that the scale in question is uni dimensional, additional analyses can be performed. Exploratory factor analysis is one method of checking dimensionality, which is conducted in the next portion of the research. Technically speaking, Cronbach‘s alpha is not a statistical test – it is a coefficient of reliability (or consistency).

A reliability coefficient of .7 or higher is considered ―acceptable‖ in most social science research situations.

3.10 Reliability Statistics

Table 3.1.8 Value of Reliability Statistics using Cronbach's Alpha

Cronbach's Alpha	No of Items
.813	42

(Source: SPSS output)

The score is **.813** which is obviously above .7 and are considered to be very strong.

Table 3.1.9 Reliability of 7 component of OTC allopathic analgesic topical Medicine

Sl no	**Component/ factors of intention to purchase of OTC allopathic analgesic topical medicine**	**Item**	**Reliability score**
1	Outcome belief	5	0.710
2	Outcome evaluation	12	0.886
3	Normative belief	6	0.795

4	Motivation to comply	5	0.848
5	Accessibility	7	0.741
6	Availability	2	0.714
7	Affordability	5	0.830

(Source: SPSS output)

In the study outcome belief, outcome evaluation, normative belief, motivation to comply, accessibility, availability, affordability are considered as components or factors influencing intention to purchase of OTC allopathic medicine. So instead of determining reliability analysis for 42 items altogether researcher has considered the variables comes under each components to find out the reliability values. The outcome shows reliability values of all components is higher than 0.70 which can be concluded that the questionnaire has a perfect reliability score.

3.11 Summary

This chapter is all about the detailed explanation of the research design and the methods employed to enable the collection and analysis of data capable of answering the research questions .Focus group interview and the pilot study were conducted. The final survey questionnaire was developed on the experience and feedback obtained during pilot survey and on analysis of data obtained from the pilot study and focus group interview. The questionnaire was improved in order to collect data during the final survey with maximum factual accuracy. Integral to the discussion was consideration of the ethical elements of the study as well as issues of reliability and validity.

Reliability checks proves satisfactory as Cronbach‘s a for all measures were above 0.70: Outcome belief (0.71), Outcome evaluation (0.88), normative belief(0.79), motivation to comply(.848) affordability (0.83), availability (0.71), accessibility (0.74) (Derived from

Table 4.9, Reliability of 7 component of OTC Medicine).Although a Cronbach‘s a of 0.70 and above is generally accepted as demonstrating a high level of homogeneity, in this study Cronbach‘s Alpha value is 0.817 which was more than the above bench mark mentioned. Apart from this exploratory factor analyses were employed to purify the multi-item scales. Items exhibiting significant loadings on the intended factor and no substantial cross-loadings were retained.

CHAPTER-IV

DATA ANALYSIS AND INTERPRETATION

4.1 Chapter 4: Introduction

In research methodology part there was a detailed discussion on objectives of the research, hypotheses , sampling techniques, focus group discussions, pilot survey and development of final questionnaire. This chapter will attempt to provide specific details of data analysis and discuss the findings from the study.

4.2 Demographic Profile of Respondents

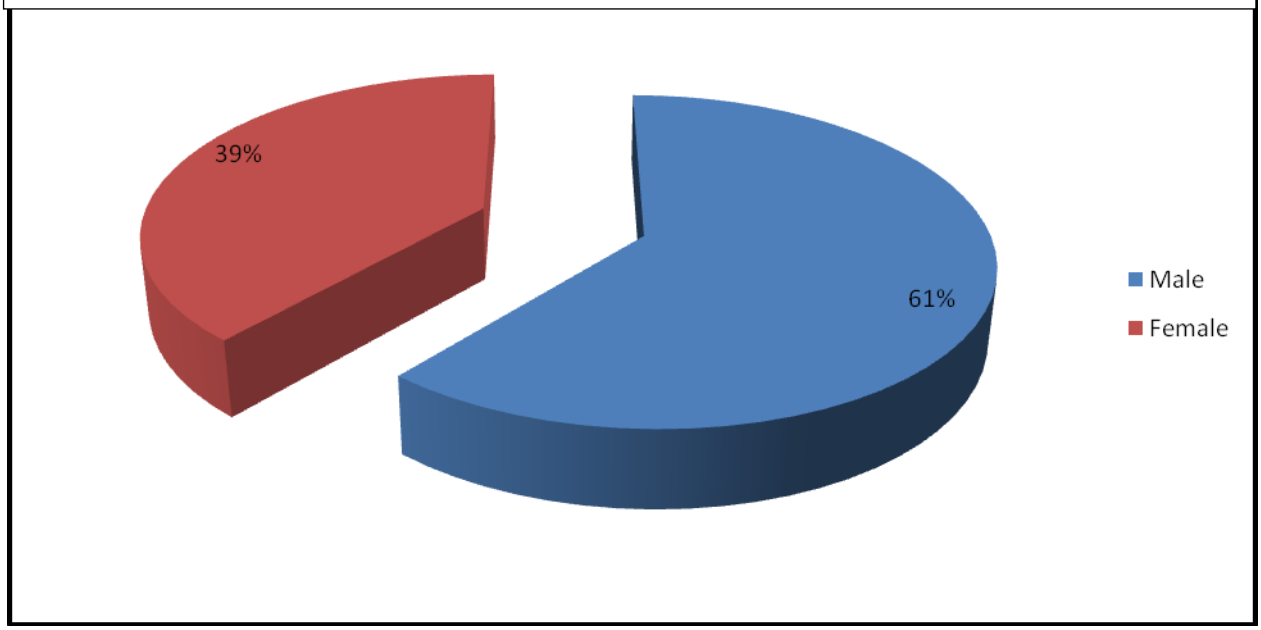
4.2.1 Gender

The descriptive cross-tabulation of demographic variables with the consumer purchasing over the counter allopathic medicines as given in Tables 4.1.1 to 4.1.5 below, followed by their interpretation.

Table 4.1.1 Gender classification.

Description	**Frequency**	**Percentage (%)**
Male	270	61
Female	171	39
Transgender	0	0
Total	441	100

Figure 4.1 **Graphical representation of gender among respondents**



Pie diagram shows 61% of the respondents are male, while 39% of the respondents are female. There is no transgender among the respondents.

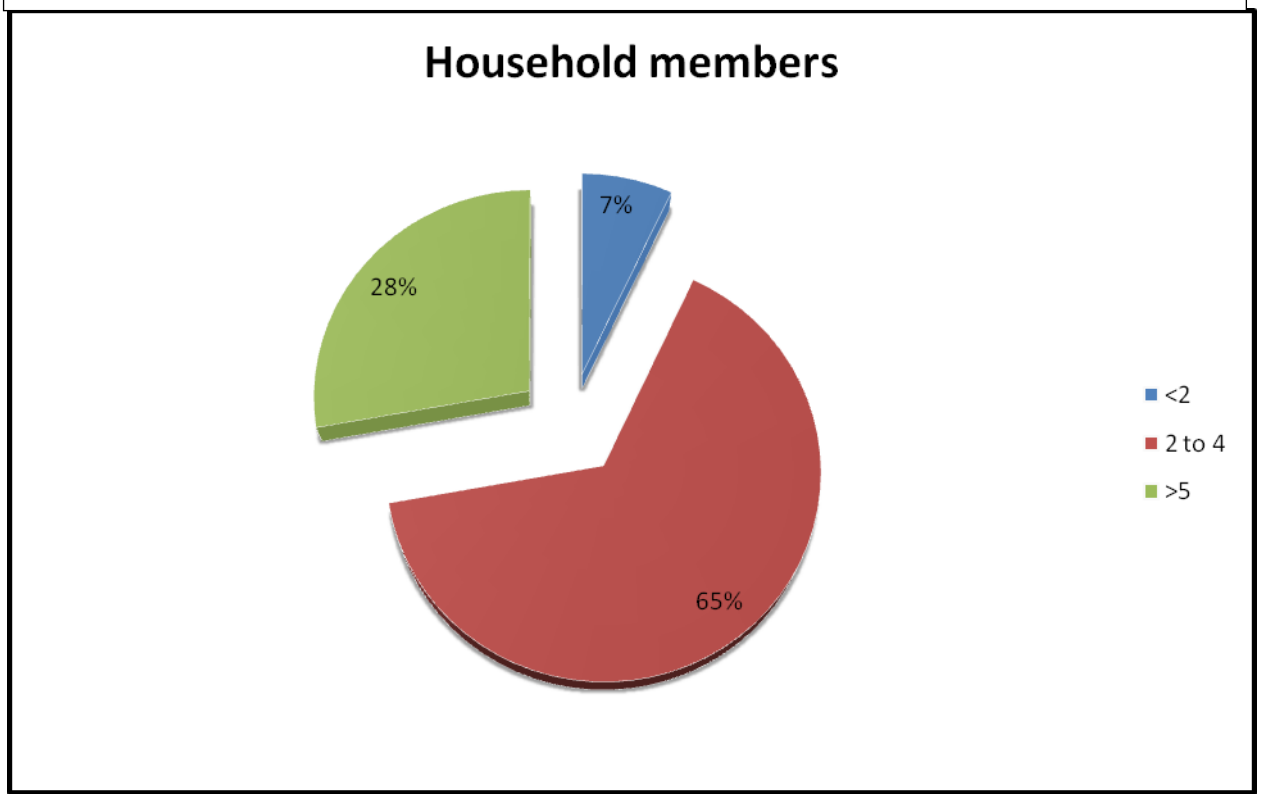
Table 4.1.2 Classification of household on the basis of members‟ number.

Description	**Frequency**	**Percentage (%)**
<2	30	7
2 – 4	288	65
>4	123	28
Total	441	100

The table 4.1.2 interpreted that 65 % of the respondents have the household members of 2 to 4 persons while 28% of the respondents have household members more than 5. Only 7% of the respondents have household members less than 2.

4.2.2 Number of Members In Household

Figure 4.2 Graphical Representation Of Members In The Household Among Respondents



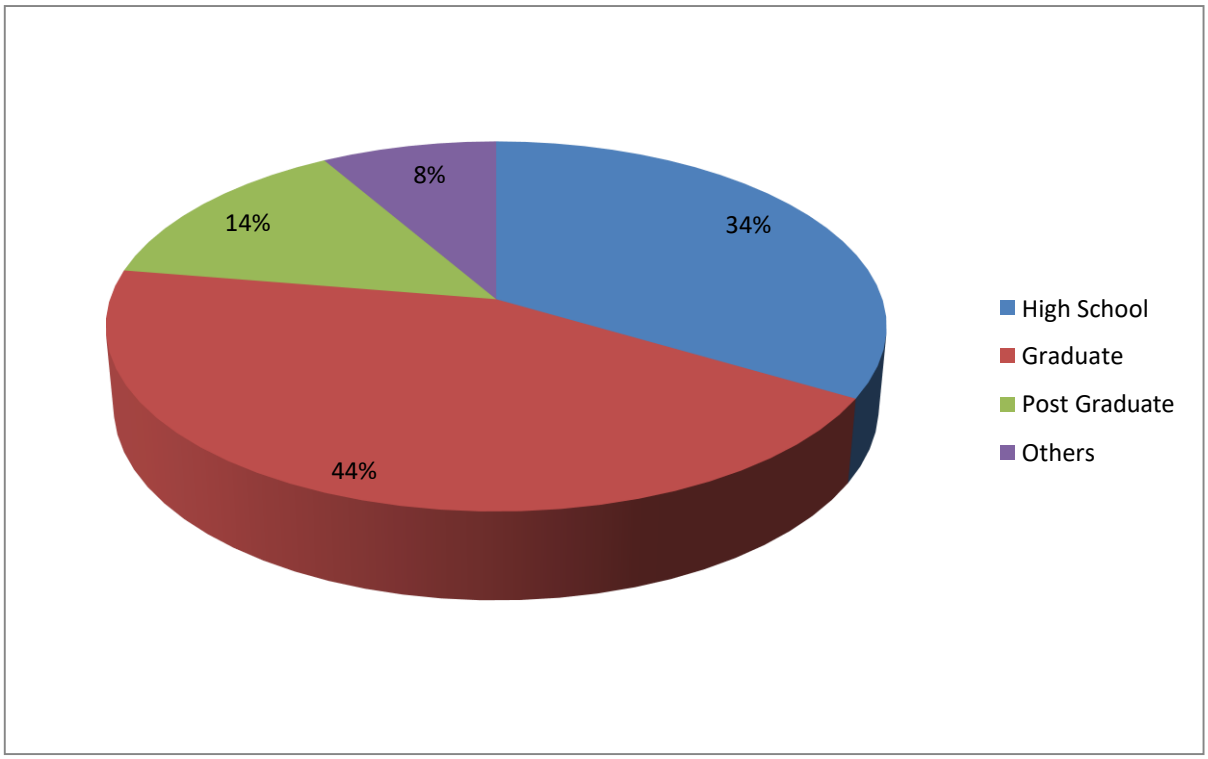
4.2.3 Educational Qualification

Table 4.1.3 Classification on the basis of educational qualifications.

Description	Frequency	Percentage (%)
High School	147	34
Graduate	195	44
Post Graduate	62	14

Others	37	8
Total	441	100

Fig 4.3 Graphical representation of educational qualifications among respondents



Pie diagram shows 8% of the respondent have other qualifications, 14% of the respondents were postgraduate, 34% of the respondents were high school passed out and 44% of the respondents were graduates.

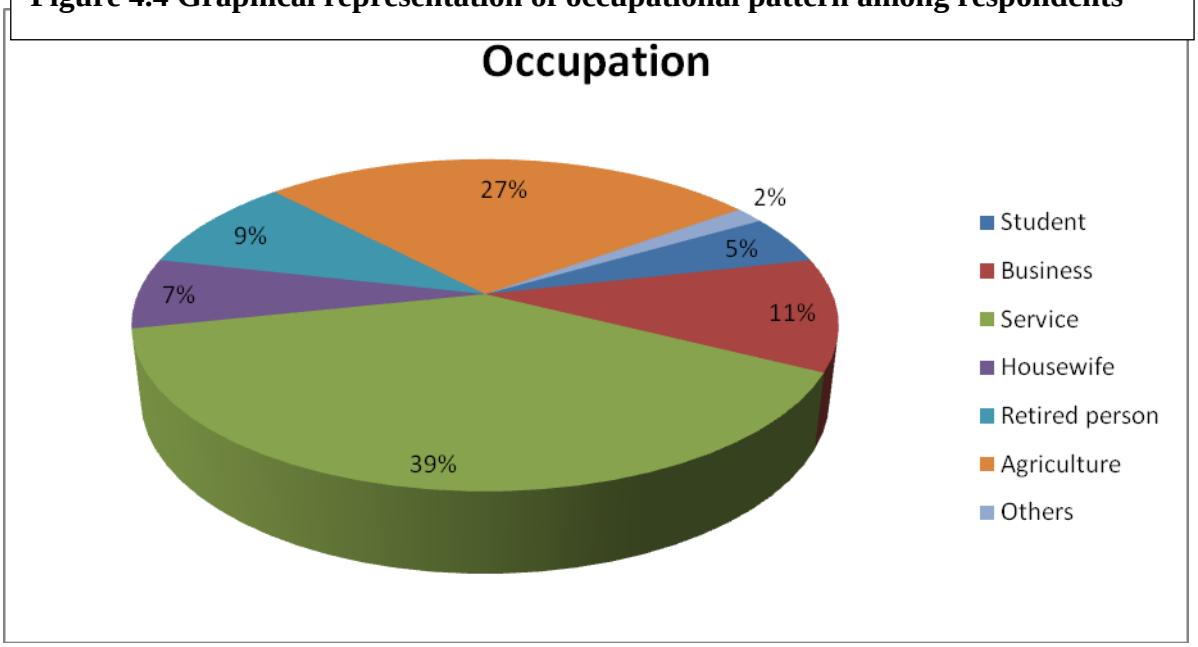
4.2.4 Occupational Patterns

Table 4.1.4 Classification on the basis of occupational patterns.

Description	**Frequency**	**Percentage (%)**
Students	21	5

Business	48	11
Services	171	39
House Wife	30	7
Retired Persons	41	9
Agriculture	119	27
Others	11	2
Total	441	100

Figure 4.4 Graphical representation of occupational pattern among respondents



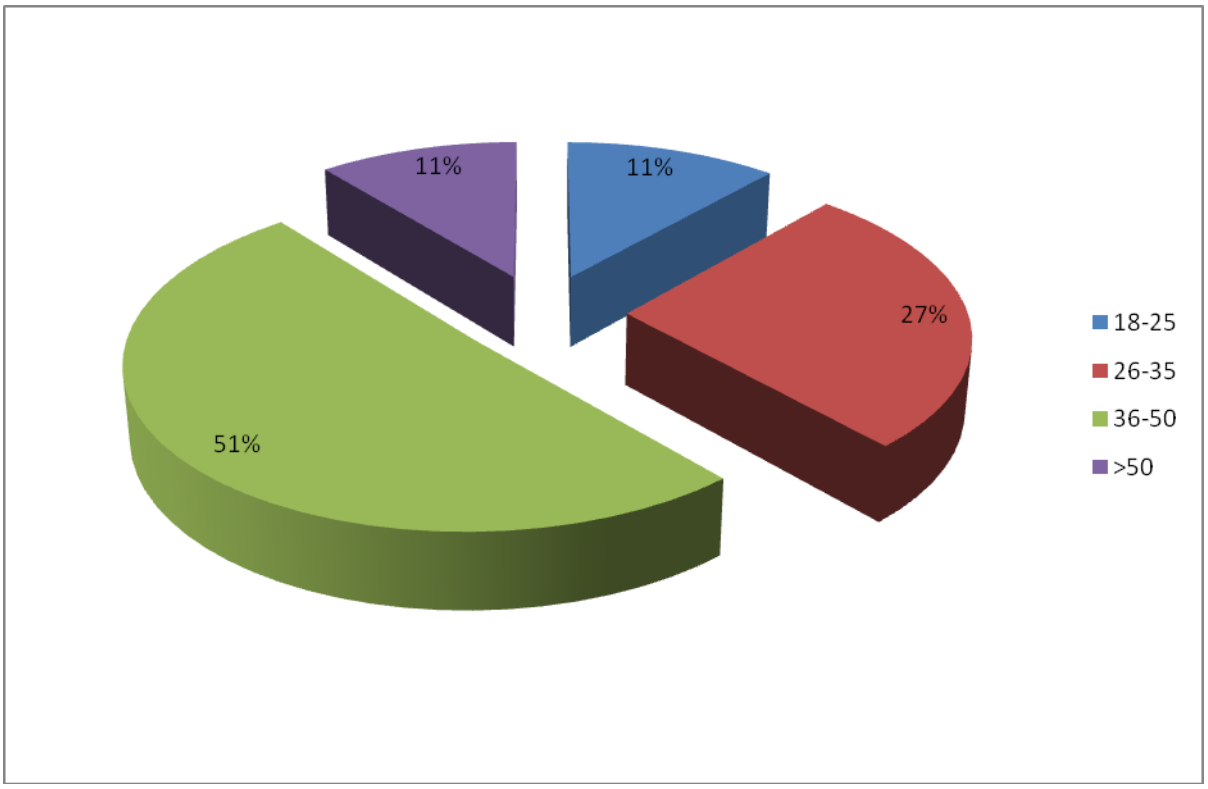
Pie diagram shows 7% of the respondents were housewife, 9% of the respondents were retired employees, 11% of the respondents were engaged in business, 27% of the respondents involved in agricultural and farming and 39% of the respondents attached to the service sector.

4.2.5 Age group

Table 4.1.5 Classification on the basis of age

Description	Frequency	Percentage
18 – 25 years	51	11%
26 -35 years	119	27%
36-50 years	223	51%
>50 years	48	11%
Total	441	100

4.5 Graphical representation of age group among respondents



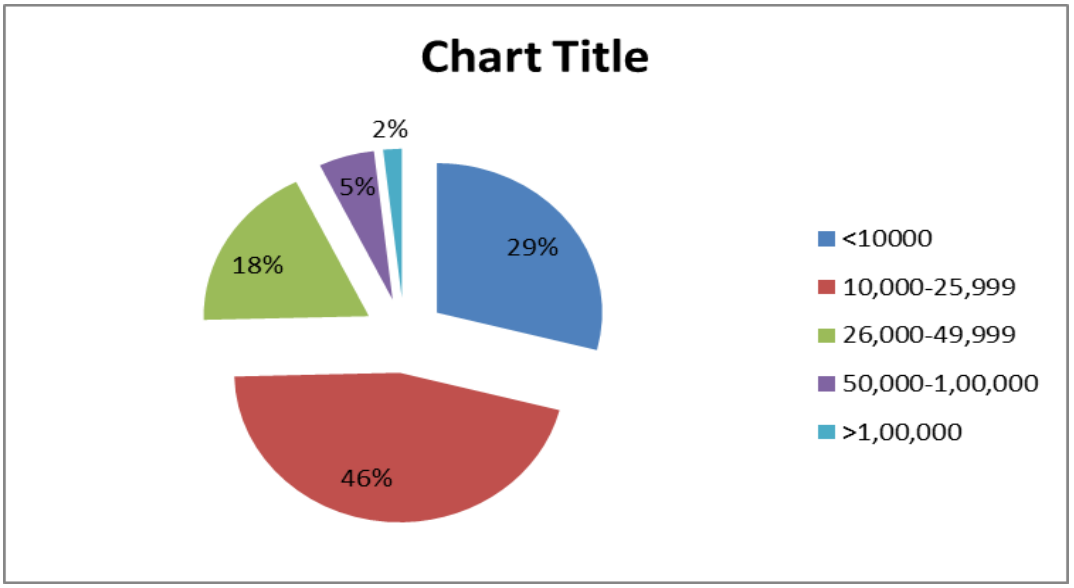
Pie diagram shows 11% of the respondent belongs to age group of 18 to 25 years while 11% of the respondents are above 50 years of age, 27% of the respondents belongs to the age group of 26 to 35 years which is followed by 51% of the respondents belong to the age group of 36-50 years

4.2.6 Graphical representation of income among respondents

Table 4.1.6 Classification on the basis of income

Description	Frequency	Percentage
< 10,000	128	29%
10,000-25,999	201	46%
26,000-49,999	80	18%
50,000-1,00,000	24	5%
>1,00,000	8	2%

Total	441	



Pie diagram shows 29% of the respondent have income less than Rs.10,000 per month while 46% of the respondents have income in between Rs. 10,000-25,999, 18% of the respondents have income in between Rs. 26,000 - 49,999 which is followed by 5% of the respondents have income in between Rs. 50,000-1,00,000 and only 2% of the respondent have income more than Rs.1,00,000.

4.2.7 Interpretation and hypothesis testing of demographic Profile

The demography consists of several factors like age, income, gender, occupation, qualification and members in the household. In the quantitative research method, analysis of different variables require to identify the relationship between a dependent variable and one or more independent variables using regression analysis. Though the regression analysis method, researcher has attempted to test the nature of relationships between independent variables and dependent variable Here _frequency of buying OTC allopathic analgesic topical medicine is the dependent variable and age, gender, education, occupation, income and family members are the independent variables.

4.2.8 Results

This table provides the *R* and R^2 values. The *R* value represents the simple correlation which indicates the degree of correlation. The R^2 value (the "**R Square**" column) indicates how much of the total variation in the dependent variable frequency can be explained by the six independent variables.

Table 4.1.7 Model summary from the demographic profile of the respondent

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	.181[a]	.033	.019	1.843

a. Predictors: (Constant), Member of household, Occupation, Gender, Education qualification, Income, Age

b. Dependent Variable: Frequency of Medicine purchase

Table 4.1.8 ANOVA output of demographic profile

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	50.062	6	8.344	2.456	.024
	Residual	1478.083	435	3.398		
	Total	1528.145	441			

(Source : SPSS output)

a. Dependent Variable: frequency

b. Predictors: (Constant), family member, occupation, gender, education, income, age

_R square‘ is defined as coefficient of determination by regression line, in this case the _P‘ value is 0.024 which is less than 0.05 at 5% level of significance, _R‘ value is 0.33 and adjusted $_R^2$ value is .019 which is very negligible. This implies demographic variables has nominal impact on the purchase of OTC allopathic analgesic topical medicines. In fact, it may be inferred that this variable is not apt for ascertaining frequency of purchase of OTC allopathic medicine. Thus null hypothesis is rejected and research hypothesis is accepted. It means though there is a significant relationship between demography and frequency of allopathic OTC medicine purchase but the previous has negligible impact on frequency of purchase.

Table 4.1.9 Coefficients of the demographic profile

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
	(Constant)	3.992	6.450	.000	6.450	.000
	Members of household	.081	.161	.024	.506	.613
	Age	-.062	.170	-.025	-.367	.714
	Gender	.288	.221	.064	1.304	.193
	Educational qua	.074	.096	.038	.774	.439
	Occupation	-.123	.124	-.068	-.988	.324
	Income	-.215	.098	-.119	-2.195*	.029

p-value <0.05 → significance

Table 4.1.8 reveals that among all the frequencies of demography none of the items under demography has significant relationship with frequency of purchase of allopathic OTC medicine except for income. Where the level of significance for income is .029 which is less than p-value<0.05

On the contrary, β value for income is the negative sign, i.e., -.119. It indicates that the said predictor variable is having highest level of impact on the criterion variable but in a negative direction. It means higher the income of the consumers lower will be the intention to purchase of OTC allopathic analgesic topical medicines.

4.2.9 Exploratory Factor Analysis Concerning Various Variables.

For measuring internal consistency and to uncover the underlying structure of large set of variables, to provide evidence that the scale in question is uni-dimensional, additional analyses have been performed. In this research, exploratory factor analysis technique has been used for checking dimensionality. The scale has been commonly used by researchers to identify a set of latent constructs underlying a battery of measured variables (Fabrigar and Leandre 1999). Measured variables are any one of several attributes of people that may be observed and measured. Examples of measured variables could be the age, gender, income, physical height, weight etc. Exploratory factor analysis technique procedures are more accurate when each factor is represented by multiple measured variables in the analysis (Warne and Larsen 2014).

KMO & Bartlett's Test is a measure of sampling adequacy that is recommended to check the case to the variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett's test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.6. Also,

Bartlett's Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. For Factor Analysis to be recommended suitable, Bartlett's Test of Sphericity must be less than 0.05

Factor analysis output:

Table 4.1.10 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.689
Bartlett‘s Test of Sphericity (Sig.)	.000

(Source: SPSS output)

KMO & Bartlett‘s Test is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett‘s test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.6. Also, the Bartlett‘s Test of Sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected to the problem being addressed through the study. For Factor Analysis to be recommended suitable, the Bartlett‘s Test of Sphericity must be less than 0.05.

Here, the value of KMO = .689 and Bartlett's Test of Sphericity = .000.

For sample size greater than 300, communalities after extraction should be above 0.5 meeting the assumption for factorability. So it can be concluded that the data are suitable for structural detection.

4.2.9.1 Factor analysis of outcome belief.

The scale was factor analyzed using principal component analysis and varimax rotation.

Table 4.1.11 Communalities of Outcome Belief (Item loading)

	Initial	Extraction
Purchase OTC allopathic analgesic topical medicine due to previous successful results	1.000	.738
Concern about the safety profile of the OTC allopathic analgesic topical medicine	1.000	.510
Belief OTC allopathic analgesic topical medicine have efficacy as I desire	1.000	.657
Past experience about OTC allopathic analgesic topical medicine plays a role in purchase decision making process	1.000	.645
Describe my thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent	1.000	.861

Extraction Method: Principal Component Analysis.

Table 4.1.12 Total Variance Explained (Outcome Belief)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.388	47.752	47.752	2.388	47.752	47.752	2.018	40.353	40.353
2	1.022	20.447	68.200	1.022	20.447	68.200	1.392	27.847	68.200

3	.732	14.650	82.849						
4	.474	9.475	92.324						
5	.384	7.676	100.000						

Extraction Method: Principal Component Analysis.

From the principal component analysis major variances were included into 2 factors (components)

Table 4.1.13 Rotated Component Matrix (Outcome Belief)		
	Component	
	1	2
Concern about the safety profile of the OTC allopathic analgesic topical medicine	.858	
Purchase OTC allopathic analgesic topical medicine due to previous successful results	.714	

Belief OTC allopathic analgesic topical medicine have efficacy as I desire	.689	.427
Past experience about OTC allopathic analgesic topical medicine plays a role in purchase decision making process	.542	.592
Describe my thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent		.926

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Now by factor analysis it has been observed that only 2 components / factors are responsible for the 5 variables. These two factors/ components (Table 4.1.12) and all together accounted for 68.19 per cent of the total variance.

First component (factor) consist of 3 variables of outcome belief they are:

A. Purchase OTC allopathic analgesic topical medicine due to previous successful results,

B. Concern about the safety profile of the OTC allopathic analgesic topical medicine,

C. OTC allopathic analgesic topical have efficacy as desire,

Second component (factor) consist of only 2 variable of outcome belief:

A. Describe thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent.

B. Past experience about OTC allopathic analgesic topical medicine plays a role in purchase decision making process

Out of the 5 variables of outcome belief , purchase of OTC allopathic analgesic topical medicine due to previous successful result and thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent are considered as the most influencing..

4;2.9.2 Factor analysis of outcome evaluation.

The scale was factor analyzed using principal component analysis and varimax rotation.

Table 4.1.14 Communalities of Outcome Evaluation (Item loading)

	Initial	Extraction
Quick relief in curing my **minor health problems**	1.000	.630
Quick relief in curing my **major health problems**	1.00	.555
Quick relief in curing my **chronic health problems.**	1.000	.731
Complete relief in curing my **minor health problems.**	1.000	.482
Complete relief in curing my **major health problems.**	1.000	.781

Complete relief in curing my **chronic health problems.**	1.000	.700
Temporary relief in curing **my minor health problems**	1.000	.495
Temporary relief in curing my **major health problems.**	1.000	.464
Temporary relief in curing **my chronic health problems**	1.000	.452
No relief in curing **my minor health problems.**	1.000	.659
No relief in curing **my major health problems**.	1.000	.783
No relief in curing **my chronic health problems**	1.000	.640

Extraction Method: Principal Component Analysis.

Table 4.1.15 Total variance explained of Outcome Evaluation

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	3.745	31.212	31.212	3.745	31.212	31.212
2	1.994	16.614	47.825	1.994	16.614	47.825
3	1.633	13.607	61.433	1.633	13.607	61.433
4	.943	7.858	69.291			
5	.847	7.062	76.352			
6	.593	4.939	81.292			
7	.545	4.541	85.833			
8	.502	4.181	90.014			
9	.380	3.164	93.178			
10	.292	2.429	95.607			
11	.279	2.321	97.928			
12	.249	2.072	100.000			
Extraction Method: Principal Component Analysis						

From the principal component analysis major variances are included into 3 factors (components)

Table 4.1.16 Rotated component Matrix of Outcome Evaluation

	Component		
	OE1	OE2	OE3

Quick relief in curing my **minor health problems**			.754
Quick relief in curing my **major health problems**	.682		
Quick relief in curing my **chronic health problems**	.843		
Complete relief in curing my **minor health problems.**			.639
Complete relief in curing my **major health problems.**	.884		
Complete relief in curing my **chronic health problems.**	.836		
Temporary relief in curing **my minor health problems**			.644
Temporary relief in curing my **major health problems.**			.541
Temporary relief in curing **my chronic health problems**	.559		
No relief in curing **my minor health problems.**		.765	
No relief in curing **my major health problems**.		.878	

No relief in curing **my chronic health problems**		.754	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Now by factor analysis it has been observed that 3 components / factors are responsible for the 12 variables. These three factors/ components (Table 4.1.15) and all together accounted for 61.42 per cent of the total variance.

First component (factor) that is OE1 consist of 5 variables of outcome evaluation.

They are as follows:

A. OTC allopathic analgesic topical medicines provide **quick** relief in curing **major health problems**

B. OTC allopathic analgesic topical medicines provide **quick** relief in curing **chronic health problems.**

C. OTC allopathic analgesic topical medicines provide **complete** relief in curing **major health problems.**

D. OTC allopathic analgesic topical medicines provide **complete** relief in curing **chronic health problems**

E. OTC allopathic analgesic topical medicines provide **temporary** relief in curing **minor health problems.**

F. OTC allopathic analgesic topical medicines provide **complete** relief in curing **minor health problems.**

Second component (factor) that is OE2 consist of only 3 variable of outcome evaluation:

They are as follows:

A. OTC allopathic analgesic topical medicines provide **no** relief in curing **minor health problems.**

B. OTC allopathic analgesic topical medicines provide **no** relief in curing **major health problems**.

C. OTC allopathic analgesic topical medicines provide **no** relief in curing **chronic health problems.**

Third component (factor) that is OE3 consist of only 4 variable of outcome evaluation:

They are as follows:

A. OTC allopathic analgesic topical medicines provide **quick** relief in curing **minor health problems**

B. OTC allopathic analgesic topical medicines provide **complete** relief in curing **minor health problems.**

C. OTC allopathic analgesic topical medicines provide **temporary** relief in curing **minor health problems**

D. OTC allopathic analgesic topical medicines provide **temporary** relief in curing my **major health problems**

Out of these 12 variables of 3 components

A. OTC allopathic analgesic topical medicines provide **quick** relief in curing **chronic health problems.**

B. OTC allopathic analgesic topical medicines provide **complete** relief in curing **major health problems.**

C. OTC allopathic analgesic topical medicines provide **complete** relief in curing **chronic health problems**

D. OTC allopathic analgesic topical medicines provide **no** relief in curing **chronic health problems.**

are considered as the most influencing.

4.2.9.3 Factor analysis of Normative belief

The scale was factor analyzed using principal component analysis and varimax rotation.

Table 4.1.17 Communalities of Normative belief (Item loading)

	Initial	Extraction
Idea of purchasing OTC allopathic analgesic topical is supported by my parents	1.000	.578
Idea of purchasing OTC allopathic analgesic topical is supported by my relatives	1.000	.624
Idea of purchasing OTC allopathic analgesic topical is supported by my friends	1.000	.707

Idea of purchasing OTC allopathic analgesic topical is supported by my colleagues	1.000	.633
Idea of purchasing OTC allopathic analgesic topical is supported by my networks on social media i.e Facebook, Twitter etc.	1.000	.353
Idea of purchasing OTC allopathic analgesic topical is supported by local pharmacist	1.000	.186

Extraction Method: Principal Component Analysis.

Table 4.1.18 Total variance explained of Normative Belief

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.081	51.352	51.352	3.081	51.352	51.352
2	.950	15.836	67.189			

3	.892	14.872	82.061			
4	.477	7.945	90.005			
5	.319	5.310	95.316			
6	.281	4.684	100.000			

Extraction Method: Principal Component Analysis.

From the principal component analysis major variances are included into1factor (component)

Table 4.1.19 Rotated Component Matrix

	Component
	1
Idea of purchasing OTC allopathic analgesic topical is supported by my parents	.760
Idea of purchasing OTC allopathic analgesic topical is supported by my relatives	.790
Idea of purchasing OTC allopathic analgesic topical is supported by my friends	.841

Idea of purchasing OTC allopathic analgesic topical is supported by my colleagues	.796
Idea of purchasing OTC allopathic analgesic topical is supported by my networks on social media i.e Facebook, Twitter etc.	.594
Idea of purchasing OTC allopathic analgesic topical is supported by local pharmacist	.432
Extraction Method: Principal Component Analysis.	
a. 1 component extracted.	

The scale was factor analyzed using principal component analysis and varimax rotation.

Now by factor analysis it has been observed that only one component / factor can be extracted, which is responsible for the 6 variables. This one component (Table 4.1.18) all together accounted for 51.352 % variance.

Out of the 6 variables of normative belief idea of purchasing OTC allopathic analgesic topical is supported by my friends is considered as the most influencing.

4.2.9.4 Factor analysis of Motivation to Comply

Table 4.1.20 Communalities Motivation to Comply

(Item loading)

	Initial	Extraction
Suggestions received from my parents with regards to OTC allopathic analgesic topical.	1.000	.613
Suggestions received from my relatives with regards to OTC allopathic analgesic topical.	1.000	.672
Suggestions received from my friends with regards to OTC allopathic analgesic topical medicine.	1.000	.636
Suggestions received from social media with regards to OTC allopathic analgesic topical medicines	1.000	.349
Suggestions received from local pharmacist with regards to OTC allopathic analgesic topical medicine.	1.000	.308

Extraction Method: Principal Component Analysis.

Table 4.1.21 Total variance explained of Motivation to Comply

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	2.578	51.553	51.553	2.578	51.553	51.553
2	.803	16.052	67.605			
3	.786	15.725	83.330			
4	.477	9.540	92.870			
5	.356	7.130	100.000			

From the principal component analysis major variances are included into1factor (component)

Table 4.1.22 Rotated Component Matrix

Motivation to Comply

	Component
	1
Suggestions received from my parents with regards to OTC allopathic analgesic topical medicine.	.783
Suggestions received from my relatives with regards to OTC allopathic analgesic topical medicine.	.820
Suggestions received from my friends with regards to OTC allopathic analgesic topical medicine.	.797
Suggestions received from social media with regards to OTC allopathic analgesic topical medicine s	.591
Suggestions received from local pharmacist with regards to OTC allopathic analgesic topical medicine.	.555
Extraction Method: Principal Component Analysis.	

Now by factor analysis it has been observed that only one component / factor can be extracted, which is responsible for 5 variables. This one component (Table 5.22) all together accounted for 51.55 % variance extracted.

Out of the 5 variables of motivation to comply suggestions received from relatives with regards to allopathic OTC allopathic analgesic topical medicine is considered as the most influencing.

4.2.9.5 Factor analysis of accessibility

The scale was factor analyzed using principal component analysis and varimax rotation.

Table 4.1.23 Communalities of accessibility (Item loading)

	Initial	Extraction
One of the reasons for buying OTC allopathic analgesic topical medicine is that prescription medicines are not always accessible.	1.000	.657
For me purchasing of OTC allopathic analgesic topical wouldn‘t be a option if prescription allopathic medicines are accessible.	1.000	.704
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Grocery	1.000	.698
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Pharma	1.000	.811
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from general stores	1.000	.678

OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from shopping mall	1.000	.767
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from online purchase	1.000	.582

Table 4.1.24 Total variance explained of Accessibility

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.601	37.157	37.157	2.601	37.157	37.157	2.465	35.210	35.210
2	1.282	18.308	55.465	1.282	18.308	55.465	1.324	18.909	54.118
3	1.015	14.499	69.965	1.015	14.499	69.965	1.109	15.846	69.965
4	.801	11.438	81.403						
5	.630	8.998	90.401						
6	.386	5.519	95.920						
7	.286	4.080	100.000						
Extraction Method: Principal Component Analysis.									

Now by factor analysis it has been observed that 3 components / factors are responsible for the 7 variables. These three factors/ components (Table 5.24) and all together accounted for 69.94 per cent of the total variance.

Table 4.1.25 Rotated Component Matrix Accessibility

	Component		
	ACB1	ACB2	ACB3
One of the reasons for buying OTC allopathic analgesic topical medicines is that prescription medicines are not always accessible.		.778	
For me purchasing of OTC allopathic analgesic topical wouldn‘t be a option if prescription allopathic medicines are accessible.		.822	
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Grocery	.798		
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Pharma			.898

OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from general stores	.821		
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from shopping mall	.872		
OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from online purchase			

Now by factor analysis it has been observed that 3 components / factors are responsible for the 7 variables. First component (factor) ACB1 consist of 3 variables of accessibility. They are as follows:

A. OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence to grocery

B. OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence to general store

C. OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence to shopping mall

Second component (factor) ACB2 consist of 2 variables of accessibility

A. Prescription medicines are not always accessible.

B. Purchasing of OTC allopathic analgesic topical medicine wouldn‘t be a option if prescription allopathic medicines are accessible.

Third component (factor) ACB3 consist of 1 variable of accessibility.

A. OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence to pharmacy

Out of the 7 variables of accessibility OTC allopathic analgesic topical medicine easily access them within 1 km from residence to pharmacy is considered as the most influencing.

4.2.9.6 Factor analysis of availability

The scale was factor analyzed using principal component analysis and varimax rotation.

Table 4.1.26 Communalities of availability

	Initial	**Extraction**
Availability of OTC allopathic analgesic topical	1.000	.631
Non availability of allopathic prescription medicine may cause to buy allopathic OTC medicine	1.000	.631
Extraction Method: Principal Component Analysis.		

Table 4.1.27 Total variance explained of availability

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.263	63.149	63.149	1.263	63.149	63.149
2	.737	36.851	100.000			

Extraction Method: Principal Component Analysis.

From the principal component analysis major variances include of 1 factor (component)

Table 4.1.28 Rotated Component Matrix of availability

	Component
	1
Availability of OTC allopathic analgesic topical medicine	.795
Non availability of allopathic prescription medicine may cause to buy OTC allopathic analgesic topical medicine	.795

Extraction Method: Principal Component

Now by factor analysis it has been observed that only one component / factor can be extracted, which is responsible for 2 variables. This one component (Table 5.25.28) all together accounted for 63.14 % variance extracted.

Both the variables of availability:

A. Availability of OTC allopathic analgesic topical medicines

B. Non availability of prescribed medicines with regards to OTC allopathic analgesic topical medicines are considered equally important as the influencing factors.

4.2.9.7 Factor analysis of affordability

The scale was factor analyzed using principal component analysis and varimax rotation.

Table 4.1.29 Communalities of affordability (Item loading)

	Initial	Extraction
The affordability of OTC allopathic analgesic topical medicine is completely under my control	1.000	.904
Higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicines	1.000	.569
There are wide varieties of OTC allopathic analgesic topical medicines of different cost for single therapy	1.000	.561

OTC allopathic analgesic topical medicines are cheaper than prescribed medicine	1.000	.759
Good quality OTC allopathic analgesic topical medicines at lower price motivate me to purchase.	1.000	.724

Extraction Method: Principal Component Analysis.

Table 4.1.30 Total variance explained of affordability

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.466	49.315	49.315	2.466	49.315	49.315	2.366	47.315	47.315
2	1.050	21.002	70.317	1.050	21.002	70.317	1.150	23.002	70.317
3	.672	13.440	83.757						
4	.463	9.261	93.018						
5	.349	6.982	100.000						

Extraction Method: Principal Component Analysis.

From the principal component analysis major variances are included into 2 factors (components)

Table 4.1.31 Rotated component matrix of affordability

	Component	
	1	2
The affordability of OTC allopathic analgesic topical medicine is completely under control	.004	.951
Higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicines	.741	.139
There are wide varieties of OTC allopathic analgesic topical medicines of different cost for single therapy	.598	.451
OTC allopathic analgesic topical medicines are cheaper than prescribed medicine	.865	.099
Good quality OTC allopathic analgesic topical medicines at lower price motivates to purchase.	.843	-.118

Rotation converged in 2 iterations.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Now by factor analysis it has been observed that 2 components / factors are responsible for the 5 variables. These two factors/ components (Table 5.31) and all together accounted for 70.31 per cent of the total variance.

First component (factor) consist of 4 variables of affordability.

They are as follows:

A. Good quality OTC allopathic analgesic topical medicines at lower price motivate me to purchase.

B. Higher cost of remedy with prescribe allopathic medicines make me to go for OTC medicines

C. There are wide varieties of OTC allopathic analgesic topical medicines of different cost for single therapy

D. OTC medicines are cheaper than prescribed medicine

Second component (factor) consist of 1 variable of affordability.

That is as follows:

The affordability of OTC allopathic analgesic topical medicine is completely under my control.

Out of the 5 variables of affordability, the affordability of OTC allopathic analgesic topical medicine is completely under my control with regards to OTC medicine is considered as the most influencing.

Thus it can be concluded that from factor analysis variables can be brought under selective components or factors influencing intention to purchase. Not only this but also the specific variables which have highest influence under each category has been detected and mentioned.

43 Differences Of Independent Variables (ANOVA) on the preferences for Over The Counter allopathic medicines

The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) variables (statistics.laerd.com). Since the researchers have more than two variables, determining which of these variables differ from each other is important. The following steps reflect SPSS‘s dedicated **One-Way ANOVA** procedure. However, since the One-Way ANOVA is also part of the General Linear Model (GLM) family of statistical tests, it can also be conducted via the Univariate GLM procedure (‒univariate‖ refers to one dependent variable). This latter method may be beneficial if analysis goes beyond the simple One-Way ANOVA and involves multiple independent variables, fixed and random factors, and/or weighting variables and covariates (e.g., One-Way ANCOVA).

4.3.1 Interpretation of the belief aspect with respect to frequency of purchase

In this study, the variable frequency of the respondents is an indicator about the different responses of our respondents regarding different ‗belief aspects‘. We use ANOVA to test if there is a statistically significant difference in frequency with respect to outcome belief status. Frequency of purchase will serve as the dependent variable, and belief status will act as the independent variable.

Table 4.1.32

Descriptive statistics of belief aspect with respect to frequency of purchase

	Mean	Std. Deviation	N
Frequency of medicine	4.15	1.861	441
Purchase OTC allopathic analgesic topical medicine due to previous successful results.	4.90	1.353	441
Concern about the safety profile of the OTC allopathic analgesic topical medicine	5.03	1.358	441
OTC allopathic analgesic topical medicine have efficacy as I desire	4.76	1.306	441
Past experience about OTC analgesic topical medicine	4.91	1.433	441
I would describe my thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent	4.31	1.421	441

Table 4.1.33 ANOVA to determine the belief aspect with respect to frequency of purchase

		Sum of Squares	Df	Mean Square	F	Sig.
bel1	Between Groups	49.674	7	7.096	4.063	.000
	Within Groups	757.946	434	1.746		
	Total	807.620	441			
bel2	Between Groups	19.386	7	2.769	1.513	.161
	Within Groups	794.171	434	1.830		

	Total	813.557	441			
bel3	Between Groups	45.251	7	6.464	3.972	.000
	Within Groups	706.360	434	1.628		
	Total	751.611	441			
bel4	Between Groups	30.114	7	4.302	2.133	.039
	Within Groups	875.445	434	2.017		
	Total	905.559	441			
bel5	Between Groups	24.541	7	3.506	1.756	.094
	Within Groups	866.373	434	1.996		
	Total	890.914	441			

(Source: SPSS Output)

Above table shows _bel 2‘ and _bel 5‘ are not statistically significant as the significance level is more than 0.05. These two variables are _I am concern about the safety profile of the allopathic OTC medicine‘ and _I would describe my thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent‘. All other belief factors are significantly related with frequency of purchase.

ANOVA has been done with the consideration of _belief' as factor. When the level of significance is less than .05 it implies there is a significant difference in the means of responses for a particular question from the different groups of people grouped according to their _attitude' towards OTC medicine. So for _bel 2‘ and _bel 5' they don't have significant differences in the response from different groups. That implies a researcher couldn't distinguish the responses from people with various attitudes. Hence these two questions have no statistically significant relation with _attitude‘.

4.3.2 Interpretation of the outcome evaluation with respect to the frequency of purchase

Table No: 4.1.34

Descriptive statistics of outcome evaluation with respect to frequency of purchase

	Mean	Std. Deviation
Frequency of medicine purchase	4.15	1.862
OTC allopathic analgesic topical medicines provide **quick** relief in curing my **minor health problems**.	5.04	1.302
OTC allopathic analgesic topical medicines provide **quick** relief in curing my **major health problems**.	3.91	1.419
OTC allopathic analgesic topical medicines provide **quick** relief in curing my **chronic health problems.**	3.38	1.455
OTC allopathic analgesic topical medicines provide **complete** relief in curing my **minor health problems.**	4.54	1.313
OTC allopathic analgesic topical medicines provide **complete** relief in curing my **major health problems.**	3.38	1.396
OTC allopathic analgesic topical medicines provide **complete** relief in curing my **chronic health problems.**	3.03	1.495
OTC allopathic analgesic topical medicines provide **temporary** relief in curing **my minor health problems.**	4.84	1.253

OTC allopathic analgesic topical medicines provide **temporary** relief in curing my **major health problems.**	4.13	1.329
OTC allopathic analgesic topical medicines provide **temporary** relief in curing **my chronic health problems.**	3.75	1.406
OTC allopathic analgesic topical medicines provide **no** relief in curing **my minor health problems.**	3.03	1.407
OTC allopathic analgesic topical medicines provide **no** relief in curing **my major health problems**.	3.51	1.572
OTC allopathic analgesic topical medicines provide **no** relief in curing **my chronic health problems.**	3.68	1.620

(Here N= 441)

Table 4.1.35 ANOVA to determine the outcome evaluation concerning the frequency of purchase

		Sum of Squares	Df	Mean Square	F	Sig.
int1	Between Groups	31.528	7	4.504	2.734	.009
	Within Groups	714.963	434	1.647		
	Total	746.491	441			
int2	Between Groups	13.008	7	1.858	.928	.485
	Within Groups	869.372	434	2.003		

	Total	882.380	441			
int3	Between Groups	22.018	7	3.145	1.504	.164
	Within Groups	907.387	434	2.091		
	Total	929.405	441			
int4	Between Groups	16.664	7	2.381	1.394	.206
	Within Groups	741.182	434	1.708		
	Total	757.846	441			
int5	Between Groups	14.682	7	2.097	1.081	.374
	Within Groups	841.701	434	1.939		
	Total	856.382	441			
int6	Between Groups	16.716	7	2.388	1.067	.384
	Within Groups	971.467	434	2.238		
	Total	988.183	441			
int7	Between Groups	24.685	7	3.526	2.303	.026
	Within Groups	662.884	433	1.531		

	Total	687.569	441			
int8	Between Groups	38.180	7	5.454	3.203	.003
	Within Groups	737.452	433	1.703		
	Total	775.633	441			
int9	Between Groups	24.878	7	3.554	1.830	.080
	Within Groups	842.733	434	1.942		
	Total	867.611	441			
Int 10	Between Groups	16.016	7	2.288	1.158	.326
	Within Groups	857.404	434	1.976		
	Total	873.421	441			
Int 11	Between Groups	24.290	7	3.470	1.421	.195
	Within Groups	1060.154	434	2.443		
	Total	1084.443	441			
Int 12	Between Groups	30.985	7	4.426	1.705	.106
	Within Groups	1124.203	433	2.596		

	Total	1155.188	441		

(Source: SPSS Output)

ANOVA has been done with the consideration of _perception & learning' as a factor. When the level of significance is less than .05 it implies there is significant difference in the means of responses for a particular question from the different groups of people grouped according to their _response' towards OTC.

Here factors 1, 7 and 8 are having a statistically significant relationship with _frequency of buying OTC medicine. These three are _OTC allopathic analgesic topical medicines provide quick relief in curing my minor health problems‘, _OTC allopathic analgesic topical medicines provide temporary relief in curing my minor health problems.‘ And _OTC allopathic analgesic topical medicines provide temporary relief in curing my major health problems.‘

4.3.3 Interpretation of the normative belief with respect to the frequency of purchase

Table 4.1.36 Descriptive statistics of normative belief with respect to frequency of purchase

	Mean	Std. Deviation
Frequency of medicine purchase	4.15	1.861
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my parents	4.50	1.413
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my relatives	4.57	1.411

My idea of purchasing OTC allopathic analgesic topical medicine is supported by my friends	4.55	1.329
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my colleagues	4.40	1.414
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my networks on social media i.e Facebook, Twitter etc	4.24	1.477
My idea of purchasing OTC allopathic analgesic topical medicine is supported by local pharmacist	5.10	1.470

(Here N= 441)

We did the same analysis with all factors related to **„Normative belief"** with the frequency of purchase for OTC allopathic analgesic topical medicines.

Table 4.1.37 ANOVA to determine the normative belief with respect to the frequency of purchase

		Sum of Squares	Df	Mean Square	F	Sig.
Nor Belief 1	Between Groups	17.137	7	2.448	1.231	.284
	Within Groups	863.354	434	1.989		
	Total	880.491	441			
Nor	Between Groups	27.865	7	3.981	2.031	.050

Belief 2	Within Groups	850.599	434	1.960		
	Total	878.464	441			
Nor Belief 3	Between Groups	28.258	7	4.037	2.332	.024
	Within Groups	751.147	434	1.731		
	Total	779.405	441			
Nor Belief 4	Between Groups	71.469	7	10.210	5.467	.000
	Within Groups	810.449	434	1.867		
	Total	881.919	441			
Nor Belief 5	Between Groups	69.309	7	9.901	4.816	.000
	Within Groups	892.302	434	2.056		
	Total	961.611	441			
Nor Belief 6	Between Groups	45.154	7	6.451	3.086	.003
	Within Groups	907.265	434	2.090		
	Total	952.419	441			

(Source: SPSS Output)

ANOVA has been done with the consideration of _Normative belief' as a factor. When the level of significance is less than .05 it implies there is a significant difference in the means of responses for a particular question from the different groups of people grouped according to their _response' towards OTC allopathic analgesic topical medicine.

Here except factor1, _My idea of purchasing OTC allopathic analgesic topical medicine is supported by my parents‘, all other factors are statistically significant.

It implies they are contributing in the deviations in frequencies to buy OTC medicines.

So, apart from _My idea of purchasing OTC allopathic analgesic topical medicine is

supported by my parents‘ there is no significant difference in the response from the rest of these groups. That implies the researcher couldn't distinguish the responses from people with various responses. Hence this question has no statistically significant relation with _Normative belief‘.

4.3.4 Interpretation of the motivation to comply with respect to the frequency of purchase

The same analysis has been done with all factors related to _Motivation to comply' which act as an independent variable to the frequency of purchase will serve as the dependent variable.

Table 4.1.38 Descriptive statistics of motivation to comply with respect to frequency of purchase

	Mean	Std. Deviation
Frequency of medicine purchase	4.15	1.861
By the suggestions received from my parents with regards to OTC allopathic analgesic topical medicine.	2.51	.924
By the suggestions received from my relatives with regards to OTC allopathic analgesic topical medicine.	2.57	.852
By the suggestions received from my friends with regards to OTC allopathic analgesic topical medicine.	2.56	.894

By the suggestions received from network of social media with regards to OTC allopathic analgesic topical medicine.	2.81	.960
By the suggestions received from local pharmacist with regards to OTC allopathic analgesic topical medicine.	2.25	1.047

(Here N= 441)

Table 4.1.39 ANOVA to determine the motivation to comply concerning the frequency of purchase

		Sum of Squares	Df	Mean Square	F	Sig.
Suggestions received from my parents	Between Groups	11.969	7	1.710	2.036	.049
	Within Groups	364.495	434	.840		
	Total	376.464	441			
Suggestions received from my relatives	Between Groups	6.502	7	.929	1.284	.256
	Within Groups	313.962	434	.723		
	Total	320.464	441			
Suggestions received from my friends.	Between Groups	13.624	7	1.946	2.491	.016
	Within Groups	339.103	434	.781		
	Total	352.726	441			
Suggestions received from network of social media	Between Groups	35.007	7	5.001	5.838	.000
	Within Groups	371.780	434	.857		
	Total	406.787	441			
Suggestions received from local pharmacist	Between Groups	26.311	7	3.759	3.571	.001
	Within Groups	456.813	434	1.053		
	Total	483.124	441			

(Source: SPSS Output)

ANOVA has been done with the consideration of _Motivation to comply' as factor. When the level of significance is less than .05 it implies there is a significant difference in the means of responses for a particular question from the different groups of people grouped according to their _response‘ towards OTC allopathic analgesic topical medicines.

Here except factor 2, all other factors are statistically significant. Factor 2 was _I feel motivated by the suggestions received from my relatives with regards to OTC allopathic analgesic topical medicine ‘.

_I feel motivated by the suggestions received from my relatives with regards to OTC allopathic analgesic topical medicine‘ there is no significant difference in the response from different groups. That implies we cannot distinguish the responses from people with various responses. Hence this question has no statistically significant relation with _motivation to comply‘.

4.3.5 Interpretation of the perceived behavioral control concerning the frequency of purchase

The same analysis has been done with all factors related to _Perceived behavioral control' which act as an independent variable to the frequency of purchase will serve as the dependent variable. Where the factors of Perceived Behavioural Control has been segregated under availability, affordability, accessibility.

4.3.5.1 Interpretation of the availability concerning the frequency of purchase

The analysis has been done with all factors related to _Availability' which act as an independent variable to the frequency of purchase will serve as the dependent variable.

Table 4.1.40 Descriptive statistics of availability with respect to frequency of purchase

	Mean	Std. Deviation
Frequency of medicine purchase	4.15	1.861
Availability of OTC medicine	12.706	3.3080
Non availability of allopathic prescription medicine may cause me to buy OTC allopathic analgesic topical medicine	1.742	.9266

(Here N= 441)

Table 4.1.41 ANOVA to determine the availability concerning the frequency of purchase.

		Sum of Squares	Df	Mean Square	F	Sig.
perbeh1	Between Groups	17.841	7	2.549	3.066	**.004**
	Within Groups	360.757	434	.831		
	Total	378.597	441			
perbeh2	Between Groups	18.477	7	2.640	1.246	.276
	Within Groups	919.044	434	2.118		
	Total	937.520	441			

(Source: SPSS Output)

ANOVA has been done with the consideration of _Availability' as a factor. When the level of significance is less than .05 it implies there is a significant difference in the means of responses for a particular question from the different groups of people grouped according to their responses towards OTC allopathic analgesic topical medicines. Here _For me the availability of OTC allopathic analgesic topical medicine is very easy', is only significant. _For me purchasing of OTC allopathic analgesic topical medicine wouldn‘t be an option if prescription allopathic medicines are accessible‘ don‘t have significant differences in the response from different groups.

4.3.5.2 Interpretation of the accessibility concerning the frequency of purchase

The analysis has been done with all factors related to _Accessibility' which act as an independent variable to the frequency of purchase will serve as the dependent variable.

	Mean	Std. Deviation
Frequency of medicine purchase	4.15	1.861
One of the reasons for buying OTC allopathic analgesic topical medicines is that prescription medicines are not always accessible.	3.876	1.4111
For me purchasing of OTC allopathic analgesic topical medicine wouldn‘t be a option if prescription allopathic medicines are accessible.	4.100	1.4690

If i want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence Grocery store	3.000	1.6344
If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence Pharmaceutical store	5.432	1.3723
If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence general store	3.620	1.7104
If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residences shopping mall	3.215	1.5138
If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence online	3.916	1.6468

(Here N= 441)

(Source: SPSS Output)

Table 4.1.42 ANOVA to determine the accessibility concerning the frequency of purchase

		Sum of Squares	Df	Mean Square	F	Sig.
Prescription medicines	Between Groups	19.828	7	2.833	1.432	.190
	Within Groups	858.328	434	1.978		

are not always accessible	Total	878.156	441			
If prescription allopathic medicines are accessible.	Between Groups	20.869	7	2.981	1.390	.208
	Within Groups	930.751	434	2.145		
	Total	951.620	441			
Grocery store	Between Groups	31.212	7	4.459	1.687	.110
	Within Groups	1146.788	434	2.642		
	Total	1178.000	441			
Pharmaceutical store	Between Groups	44.744	7	6.392	3.531	**.001**
	Within Groups	785.720	434	1.810		
	Total	830.464	441			
General store	Between Groups	44.403	7	6.343	2.210	**.032**
	Within Groups	1245.742	434	2.870		
	Total	1290.145	441			
Shopping mall	Between Groups	34.809	7	4.973	2.212	**.032**
	Within Groups	975.772	434	2.248		
	Total	1010.581	441			
Residence online	Between Groups	7.060	7	1.009	1.087	.371
	Within Groups	402.743	434	.928		
	Total	409.803	441			

ANOVA has been done with the consideration of _Accessibility'‘ as factor. When the level of significance is less than .05 it implies there is a significant difference in the means of responses for a particular question from the different groups of people grouped according to their responses towards OTC allopathic analgesic topical medicine.

Here the significant factors are _If I want to access OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from Pharmaceutical store, General store and Shopping mall'. As their value of significance is less than .05. Other factors are insignificant.

4.3.5.3 Interpretation of the affordability concerning the frequency of purchase

The analysis has been done with all factors related to _Affordability' which act as an independent variable to the frequency of purchase will serve as the dependent variable.

Table No 4.1.43 Descriptive Statistics of affordability with respect to frequency of purchase

	Mean	Std. Deviation	N
Frequency of medicine purchase	4.15	1.861	441
The affordability of OTC allopathic analgesic topical medicine is completely under my control	4.948	.9640	441
Higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicine	3.674	1.4655	441
There are wide varieties of OTC allopathic analgesic topical medicine of different cost for single therapy	4.566	1.1474	441

OTC allopathic analgesic topical medicine are cheaper than prescribed medicine	4.197	1.3349	441
Good quality OTC allopathic analgesic topical medicine at lower price motivate me to purchase.	4.115	1.3925	441

Table 4.1.44 ANOVA to determine the affordability concerning the frequency of purchase

		Sum of Squares	Df	Mean Square	F	Sig.
perbeh10	Between Groups	47.815	7	6.831	3.297	**.002**
	Within Groups	899.271	434	2.072		
	Total	947.086	441			
perbeh11	Between Groups	14.862	7	2.123	1.629	.125
	Within Groups	565.735	434	1.304		
	Total	580.597	441			
perbeh12	Between Groups	6.932	7	.990	.552	.795
	Within Groups	778.943	434	1.795		
	Total	785.876	441			
perbeh13	Between Groups	21.969	7	3.138	1.635	.124
	Within Groups	833.147	434	1.920		
	Total	855.115	441			
perbeh14	Between Groups	19.158	7	2.737	2.065	**.046**

Within Groups	575.224	434	1.325		
Total	594.382	441			

(Source: SPSS Output)

ANOVA has been done with the consideration of _affordability‘ as factor. When the level of significance is less than .05 it implies there is significant difference in the means of responses for a particular question from the different groups of people grouped according to their responses towards OTC medicine.

_The affordability of OTC allopathic analgesic topical medicine is completely under my control‘ and _Good quality OTC allopathic analgesic topical medicine at lower price motivate me to purchase‘ are the two significant factors. Others are insignificant as their values are more than .05

The above table shows all the significance values are, less than 0.05. That means all of these variables are significantly contributing to the different frequencies to buy OTC allopathic analgesic topical medicine.

4.4 Hypothesis 2: Relationship between consumer expectation of favourable outcome belief for OTC allopathic medicine with personal attitude.

Regression analysis and descriptive statistics has been used to determine the relationship between consumer expectation of favorable outcome belief with personal attitude.

Table-**4.1.45 Descriptive statistics of Outcome Belief**

	Mean	Std. Deviation

Outcome belief	23.91	4.678
Attitude	94.03	14.334

(Here N= 441)

Table - **4.1.46** Correlations between outcome belief and attitude

		Out come belief	Attitude
Outcome belief	Pearson Correlation (R)	1	.851**
	Sig. (2-tailed)		.000
	N	441	441
Attitude	Pearson Correlation (R)	.851**	1
	Sig. (2-tailed)	.000	
	N	441	441
**. Correlation is significant at the 0.01 level (2-tailed).			

Data on table 4.1.45 and 4.1.46 reveals that there is statically significant correlation (0.851) as the p-value < 0.001 between outcome belief and attitude. Mean value is 23.91 and stander deviation is 4.678 for outcome belief of purchasing of OTC allopathic medicine where as for personal attitude with mean value of 94.03 and stander deviation is 14.334 which signifies that consumer expectation of favourable outcome belief with respect to OTC allopathic analgesic topical medicine has a positive relationship with consumer attitude.

This signifies that the null hypothesis is rejected. Based on the above statistical results the alternative hypothesis is accepted.

In the study, consumer attitude towards OTC allopathic analgesic topical medicine is measured by two things - outcome belief and outcome evaluation.

45 Hypothesis 3: A favourable outcome evaluation of OTC allopathic analgesic topical medicines lead to a positive consumer attitude .

Regression analysis has been used to determine the relationship between outcome evaluation with personal attitude.

Table 4.1.47 Descriptive Statistics outcome evaluation

	Mean	Std. Deviation
Attitude	94.03	14.334
Outcome Evaluation	46.21	8.051

(Here N= 441)

Table 4.1.48 Correlations between attitude and outcome evaluation

		ATTITUDE	Outcome Evaluation
Attitude	Pearson Correlation (R)	1	.792**

	Sig. (2-tailed)		.000
	N	441	441
Outcome Evaluation	Pearson Correlation	.792**	1
	Sig. (2-tailed)	.000	
	N	441	441
**. Correlation is significant at the 0.01 level (2-tailed).			

Data on table 5.64 and table 5.63 reveals that there is statically significant correlation that is 0.792 (as the p-value < 0.001) between outcome evaluation and attitude. Mean value is 46.21 and stander deviation is 8.051 for outcome evaluation of purchasing of OTC allopathic medicine where as for attitude with mean value of 94.03 and stander deviation is 14.334 which signifies that consumer expectation of favourable outcome evaluation with respect to OTC allopathic medicine has a positive relationship with consumer attitude.

This signifies that the null hypothesis is rejected. Based on the above statistical results the alternative hypothesis is accepted.

4.6 Hypothesis 4 : Personal attitude has an influence on intention of the consumer to purchase OTC allopathic analgesic topical medicine.

Regression analysis has been used to determine the relationship between attitude with frequency of purchase of OTC allopathic analgesic topical medicines.

Table 4.1.49 Descriptive Statistics attitude

	Mean	Std. Deviation
Attitude	94.03	8.334

Freq_ med	4.15	1.861

(Here N= 441)

Table 4.1.50 Correlations between attitude and frequency of medicine purchase

		Attitude	Frequency of medicine purchase
Attitude	Pearson Correlation	1	0.432*
	Sig. (2-tailed)		.012
	N	441	441
Frequency of medicine purchase	Pearson Correlation	0.432*	1
	Sig. (2-tailed)	.012	
	N	441	441
*. Correlation is significant at the 0.01 level (2-tailed).			

Data on table 5.65 and table 5.66 reveals that there is statically significant positive correlation that is .432 (as the p-value < 0.001) between intention to purchase OTC allopathic medicine with personal attitude which support Hypothesis 4 . Mean value is 94.03 and stander deviation is 8.334 for attitude, where as for frequency of purchase OTC allopathic analgesic topical medicine mean value is 4.15and standard deviation is1.861. Statistical analysis showed that there was positive influence by the personal attitude to intention to purchase OTC allopathic medicine by the consumer.

This signifies that the null hypothesis is rejected. Based on the above statistical results the research hypothesis is accepted.

4.7 Hypothesis 5: Stronger normative belief leads to higher intention of the consumer to purchase OTC allopathic analgesic topical medicine.

Regression analysis has been used to determine the relationship between normative belief with intention of purchase of OTC allopathic analgesic topical medicines.

Table 4.1.51 Descriptive Statistics normative belief

	Mean	Std. Deviation
Frequency of medicine purchase	4.15	1.861
Normative belief	27.36	5.990

(Here N= 441)

Table **4.1.52 Correlations between normative belief with intention to purchase**

		Frequency of medicine purchase	normative belief
Frequency of medicine	Pearson Correlation	1	-.214**

purchase	Sig. (2-tailed)		.000
	N	441	441
Normative belief	Pearson Correlation	-.214**	1
	Sig. (2-tailed)	.000	
	N	441	441
**. Correlation is significant at the 0.01 level (2-tailed).			

Data on table 4.1.51 and 4.1.52 reveals that there is statically significant negative correlation that is -.214 (as the p-value < 0.001) between intention to purchase OTC allopathic medicine with normative belief which denies the Hypothesis 5 . Mean value is 4.15 and stander deviation is1.861 for frequency of medicine purchase, where as for normative belief mean value is 27.36 and standard deviation 5.990 Statistical analysis showed that there is negative influence on the frequency of OTC medicine purchase by the consumer to normative belief

This signifies that the null hypothesis is accepted. Based on the above statistical results the alternative hypothesis is rejected.

48 Hypothesis 6: Stronger motivation to comply for OTC allopathic analgesic topical medicine leads to higher intentions among consumers to purchase

Regression analysis has been used to determine the relationship between motivation to comply with intention of purchase of OTC allopathic analgesic topical medicines.

Table 4.1.53 Descriptive Statistics motivation to comply

	Mean	Std. Deviation	N
Frequency of medicine purchase	4.15	1.861	441

Motivation to comply	12.71	3.308	441

Table 4.1.54 Correlations between motivation to comply with intention to purchase

		Frequency of medicine purchase	Motivation to comply
Frequency of medicine purchase	Pearson Correlation	1	.234**
	Sig. (2-tailed)		.000
	N	441	441
Motivation to comply	Pearson Correlation	.234**	1
	Sig. (2-tailed)	.000	
	N	441	441
**. Correlation is significant at the 0.01 level (2-tailed).			

Data on table 4.1.53 and 4.1.54 reveals that there is statically significant negligible correlation (.234) between intention to purchase OTC allopathic medicine with motivation to comply which denies the Hypothesis 6. Mean value is 4.15 and stander deviation is1.861 for frequency of medicine purchase, where as for motivation to comply, mean value is 12.71 and standard deviation 3.30. Statistical analysis showed that there is nominal influence on the

frequency of OTC allopathic analgesic topical medicine purchase by the consumer to motivation to comply.

This signifies that the null hypothesis is accepted. Based on the above statistical results the alternative hypothesis is rejected.

49 Hypothesis 7: Higher perceived behavioral control lead to a significant impact on intention to purchase of OTC allopathic analgesic topical medicines.

Regression analysis has been used to determine the relationship between PBC with intention of purchase of OTC allopathic analgesic topical medicines.

Table 4.1.55 Descriptive Statistics of PBC

	Mean	Std. Deviation	N
Frequency of medicine purchase	4.15	1.861	441
PBC	63.11	2.705	441

Table 4.1.56 Correlations between PBC with intention to purchase

		Frequency of medicine purchase	PBC
Frequency of medicine	Pearson Correlation	1	0.654
	Sig. (2-tailed)		.0.023

purchase	N	441	441
PBC	Pearson Correlation	0.654	1
	Sig. (2-tailed)	.023	
	N	441	441
**. Correlation is significant at the 0.05 level (2-tailed).			

Data on table 4.1.55 and 4.1.56 reveals that there is statically significant correlation (.654) between intention to purchase OTC allopathic analgesic topical medicine with PBC which signifies the Hypothesis 6. Mean value for frequency of medicine purchase is 4.15 and Std. Deviation is 1.861.

Similarly for PBC mean value is 63.11 and Std. deviation is 2.705. So, there is higher PBC leads to a significant impact on intention to purchase OTC allopathic medicine .

This signifies that the null hypothesis is rejected. Based on the above statistical results the alternative hypothesis is accepted.

410 Hypothesis 8: Perceived behavioral control is more dominant than attitude and subjective norms in determining behavioral intention.

Regression analysis has been used to determine the relationship between PBC with intention of purchase of OTC allopathic analgesic topical medicines.

Table-4.1.57 Regression analysis has been used to determine the relationship between PBC with intention of purchase of OTC allopathic analgesic topical medicines.

		Frequency of medicine purchase	PBC	ATTITUDE	SUBJECTIVE NORM
Frequency of medicine purchase	Pearson Correlation	1			

	Sig. (2-tailed)				
	N	441			
PBC	Pearson Correlation	0.654*	1		
	Sig. (2-tailed)	.023			
	N	441	441		
ATTITUDE	Pearson Correlation	0.432*	.367**	1	
	Sig. (2-tailed)	.012	.000		
	N	441	441	441	
SUBJECTIVENORM	Pearson Correlation	-.098*	.274**	.321**	1
	Sig. (2-tailed)	.040	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).).* Correlation is significant at the 0.05 level (2-tailed)

Data on table 4.1.57 shows that there is statistically significant correlation (0.654) between PBC with the intention to purchase OTC allopathic analgesic topical medicine with 0.05% level of significance and with attitude it is (.432) with 0.05% level of significance and where as for subjective norms the co relation value is (-.098) with 0.05% level of significance which is statistically significant with negative correlation . This implies that PBC is more dominant than attitude and subjective norms in determining behavioral intention to purchase OTC allopathic analgesic topical medicine.

This signifies that the null hypothesis is rejected. Based on the above statistical results the alternative hypothesis is accepted.

4.11 Hypothesis 9. Availability is more dominant factor than any other factors in Perceived Behavioural Control.

Regression analysis has been used to determine the most dominant factors among availability, affordability and assess ability in PBC with intention of purchase of OTC allopathic analgesic topical medicines.

Table No: 4.1.58 Correlations among Availability, Accessibility and Affordability

		PBC	Availability	Accessibility	Affordability
PBC	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	441			
Availability	Pearson Correlation	.861	1		
	Sig. (2-tailed)	.001			
	N	441	441		
Accessibility	Pearson Correlation	.482	-.196**	1	
	Sig. (2-tailed)	.205	.000		
	N	441	441	441	
Affordability	Pearson Correlation	.374	-.432**	.487**	1
	Sig. (2-tailed)	.312	.000	.000	
	N	441	441	441	
**. Correlation is significant at the 0.01 level (2-tailed).					

Data on table 4.1.58 reveals that there is statistically significant correlation between availability, accessibility and affordability with PBC. But the value of correlation with

availability is highest that is (.861) whereas for accessibility and affordability the values are .482 and .347 respectively. So it can be concluded that availability is a more dominant factor than any other factors among PBC.

This signifies that the null hypothesis is rejected. Based on the above statistical results the alternative hypothesis is accepted.

4.12 Hypothesis 10. Purchase intention of a consumer is determined by loyalty towards a particular brand of OTC allopathic analgesic topical medicine.

To determine whether the purchase intention of a consumer is related to brand loyalty, a hypothesis was developed considering brand loyalty as an important attribute. To analyze this, a questionnaire was prepared to understand whether the consumers agree to the hypothesis using a 5 point Likert scale. The hypothesis statistically was verified using Chi-Square Method as shown in following tables.

Table 4.1.59 :

Purchase Intention vs Loyalty. Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Overall Satisfaction * Loyalty	441	100.0%	0	0.0%	441	100.0%

Table 4.1.60 :

Overall Satisfaction (Loyalty cross tabulation)

		Loyalty					Total
		Very Certain	Certain	No Idea	Uncertain	Very Certain	
Overall Satisfaction	Strongly Unfavourable	12	15	3	2	4	36
	Unfavourable	33	131	43	30	9	246
	Neutral	4	7	17	16	6	50

	Strongly Favourable	1	2	7	12	5	27
	Strongly Favourable	2	22	36	13	9	82
Total		52	177	106	73	33	441

Table 4.1.61 :

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	114.377[a]	16	.000
Likelihood Ratio	113.064	16	.000
N of Valid Cases	441		

a. 6 cells (24.0%) have expected count less than 5. The minimum expected count is 2.02.

Table 4.1.62 :

Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.509	.000
	Cramer's V	.255	.000
N of Valid Cases		441	

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Here χ^2 calculated at d.f.=16 (114.38) is greater than χ^2 tabulated at df=16 (26.96) at 95% level of confidence. Since null hypothesis is rejected research hypothesis is accepted. Hence it can be inferred that Purchase Intention of a consumer is determined by loyalty towards a particular brand of OTC allopathic analgesic topical medicine. Since the value obtained from Cramer's V is .255 it justifies that though there is a brand loyalty, the association it is not very strong. Hence it is proposed that markets should identify the reasons about the weak brand loyalty and try to improve the value creating more satisfaction.

4.1.3 Statistical analysis between less frequent users and more frequent users on the basis of different independent variables.

In the study, total number of respondents is divided according to their frequency of buying OTC allopathic analgesic topical medicine.

User group - This group is purchasing the OTC allopathic analgesic topical medicine daily or once a week or every fortnight.

Less user group- This group is purchasing OTC allopathic analgesic topical medicine once in a month or bi monthly or once in quarter.

A T-test was conducted to determine a significance difference between the mean of 2 groups; frequent users and lesser users.

As the attitude of a consumer to purchase OTC allopathic analgesic topical medicine is depend upon the outcome evaluation and outcome belief (as derived from the research) so the first set of statistical analysis between user and lesser user is based upon outcome belief.

The statistical analysis between user and lesser user is based on the five predictor variables related to outcome belief are identified and on which the data has been collected shows the following results;

Table: 4.1.63 Statistical analysis between the less frequent users and more frequent users on the basis of outcome belief

T-Test (Outcome belief)

Group Statistics							
		N	Mean	Std. Deviation	mean differences	t-value	Significant value(p-value)
Purchase OTC allopathic	frequently user	267	4.81	1.381	-.231	-1.759	.079

analgesic topical medicine previous successful results	less user	175	5.04	1.301			
safety profile of the OTC allopathic analgesic topical medicine	frequently user	267	5.03	1.355	.005	.039	.969
	less user	175	5.03	1.366			
belief OTC allopathic analgesic topical medicine have efficacy as I desire	frequently user	267	4.83	1.286	.182	1.435	.152
	less user	175	4.65	1.331			
past experience about OTC allopathic analgesic topical medicine plays a role in purchase decision making process	frequently user	267	4.92	1.396	.015	.106	.916
	less user	175	4.90	1.492			
would describe my thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent	frequently user	267	4.37	1.485	.157	1.139	.255
	less user	175	4.22	1.317			

p-value<0.05 significance

(Source: SPSS Output)

On the basis of the analysis of the variables of outcome belief it has been found that none of the factors under outcome belief has significant p values. It means there is no significant difference in the responses from lesser user to user of OTC allopathic analgesic topical medicines.

Similarly the statistical analysis between user and lesser user of twelve predictor variables related to outcome evaluation on which the data has been collected shows;

Table 4.1.64

Statistical analysis between the less frequent users and more frequent users on the basis of outcome evaluation

T-Test (OUTCOME EVALUATION)

Group Statistics

	GROUP	Mean	Std. Deviation	mean diff	t-value	Significant value(p-value)
Quick relief in curing my **minor health problems**	frequently user	5.00	1.291	-.076	-.602	.547
	less user	5.08	1.319			
Quick relief in curing my **major health problems**	frequently user	3.88	1.298	-.074	-.538	.591
	less user	3.95	1.579			
Quick relief in curing my **chronic health problems.**	frequently user	3.38	1.436	-.074	.089	.929
	less user	3.37	1.479			
Complete relief in curing my **minor health problems.**	frequently user	4.60	1.292	.163	1.279	.201
	less user	4.44	1.337			
Complete relief in curing my **major health problems.**	frequently user	3.46	1.335	.207	1.532	.126
	less user	3.26	1.473			
Complete relief in curing my **chronic health problems.**	frequently user	3.04	1.499	.005	.034	.973
	less user	3.04	1.499			
Temporary relief in curing **my minor health problems.**	frequently user	4.94	1.222	.256	2.112*	.035
	less user	4.68	1.280			
Temporary relief in curing my **major health problems.**	frequently user	4.19	1.292	.166	1.284	.200
	less user	4.03	1.379			

Temporary relief in curing **my chronic health problems.**	frequently user	3.73	1.397	-.073	-.538	.591
	less user	3.80	1.414			
No relief in curing **my minor health problems.**	frequently user	3.04	1.413	.022	.161	.872
	less user	3.02	1.402			
No relief in curing **my major health problems**	frequently user	3.45	1.495	-.147	-.963	.336
	less user	3.60	1.675			
No relief in curing **my chronic health problems.**	frequently user	3.70	1.628	.027	.170	.865
	less user	3.67	1.613			

p-value<0.05 → significance
(Source: SPSS Output)

On the basis of the analysis of the variables of outcome evaluation it has been found that only _temporary relief in curing my minor health problems‘ under outcome evaluation has significant p values. Where the p value is .035 which is less than 0.05 level of significance. And the t value is 2.112 which means there exist a considerable difference in opinion among lesser users and users. There is no significant difference in the responses for rest of the items of outcome evaluation from lesser user to user of OTC allopathic analgesic topical medicines.

As we have derived from the research that motivation to comply and normative belief have significant role as the factors influencing consumer preferences for OTC allopathic analgesic topical medicines so the statistical analysis has been conducted between user and lesser user on the variables representing both of them.

Table 4.1.65 Statistical analysis between less frequent users and more frequent users on the basis of normative belief

T-Test (Normative Belief)

	group	Mean	Std. Deviation	mean diff	t-test	Significant value(p-value)
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my parents	frequently user	4.52	1.428	.054	.393	.695
	less user	4.46	1.393			
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my relatives	frequently user	4.60	1.388	.070	.508	.612
	less user	4.53	1.450			
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my friends	frequently user	4.64	1.354	.229	1.776	.076
	less user	4.41	1.283			
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my colleagues	frequently user	4.56	1.398	.404	2.961*	.003
	less user	4.15	1.408			
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my networks on social media i.e. Facebook, Twitter etc.	frequently user	4.46	1.383	.556	3.933*	.000
	less user	3.91	1.555			

My idea of purchasing OTC allopathic analgesic topical medicine is supported by local pharmacist	frequently user	5.17	1.442	.169	1.180	.239
	less user	5.00	1.509			

p-value<0.05 → significance
(Source: SPSS Output)

On the basis of the analysis of the variables of normative belief it has been found that _my idea of purchasing OTC allopathic analgesic topical is supported by my colleagues and my idea of purchasing OTC allopathic analgesic topical medicine is supported by my networks on social media‘ have significant p values. Where the p values are .003 and .000 respectively. Both the p values are less than 0.05 level of significance. And the t values are 2.961 and 3.933 respectively. This means there exist a considerable difference in opinion among lesser users and users on this two items. As higher t value indicates larger difference exist among two sample set, so the research conclude that among the two items identified under normative belief there are larger difference in opinion among lesser user and user on _purchasing OTC allopathic analgesic topical medicine is supported by my networks on social media‘.

Similarly the statistical analysis has been conducted between user and lesser user on the variables representing motivation to comply

Table 4.1.66 Statistical analysis between less frequent users and more frequent users on the basis of motivation to comply

T-Test (Motivation to comply)

	group	Mean	Std. Deviation	mean diff	t-test	Significant value(p-value)

Suggestion Received from Parent	frequently user	2.43	.908	-.198	-2.211*	.028
	less user	2.63	.937			
Suggestion Received from Relatives	frequently user	2.50	.824	-.167	-2.018*	.044
	less user	2.67	.887			
Suggestion Received from Friends	frequently user	2.55	.876	-.032	-.371	.711
	less user	2.58	.924			
Suggestion received from social Media	frequently user	2.66	.892	-.383	-4.173*	.000
	less user	3.05	1.016			
Suggestion received from Pharmacist	frequently user	2.16	1.081	-.218	-2.151*	.032
	less user	2.38	.981			

p-value<0.05 → significance

(Source: SPSS Output)

On the basis of the analysis of the variables of motivation to comply it has been found that _suggestion received from parent, suggestion received from relatives, suggestion received from social media and suggestion received from pharmacist have significant p values. Where the p values are .028, .044, .000 and .032 respectively. And the p values are less than 0.05 level of significance. And the t values are -2.211, -2.018, -4.173 and -2.151 respectively. This means there exist a considerable difference in opinion among lesser users and users on these four items. As higher t value indicates larger difference exist among four sample set, so the research conclude that among the four items identified under motivation to comply there is larger difference in opinion among lesser user and user on _Suggestion received from social media‘.

Table 4.1.67 Statistical analysis between less frequent users and more frequent users on the basis of affordability

T-Test (Affordability)

Group Statistics							
	group	N	Mean	Std. Deviation	mean diff	t-test	Significant value(p-value)
The affordability of OTC allopathic analgesic topical medicine is completely under my control	frequently user	267	4.95	.908	-.001	-.011	.991
	less user	175	4.95	1.046			
Higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicine	frequently user	267	3.85	1.394	.435	3.081*	.002
	less user	175	3.41	1.536			
There are wide varieties of OTC allopathic analgesic topical medicine of different cost for single therapy	frequently user	267	4.58	1.085	.047	.422	.673
	less user	175	4.54	1.240			
OTC allopathic analgesic topical medicine are cheaper than prescribed medicine	frequently user	267	4.20	1.322	.014	.105	.916
	less user	175	4.19	1.358			
Good quality OTC allopathic analgesic topical medicine at lower price motivate me to purchase.	frequently user	267	4.16	1.385	.115	.851	395
	less user	175	4.05	1.405			

p-value<0.05 → significance

On the basis of the analysis of the variables of affordability it has been found that only _Higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicine‘ under affordability has significant p values. Where the p value is .002 which is less than 0.05 level of significance. And the t value is 3.081 which means there exist a considerable difference in opinion among lesser users and users. There is no significant difference in the responses for rest of the items of affordability from lesser user to user of OTC allopathic analgesic topical medicines.

Table 4.1.68 Statistical analysis between less frequent users and more frequent users on the basis of availability

T-Test (Availability)

Group Statistics							
	group	N	Mean	Std. Deviation	mean diff	t-test	Significant value(p-value)
For me availability of OTC medicine	frequently user	267	1.70	.969	-.096	-1.064	.288
	less user	175	1.80	.858			
Non availability of allopathic prescription medicine	frequently user	267	3.87	1.399	.142	889	.375
	less user	175	3.74	1.545			

On the basis of the analysis of the variables of availability it has been found that none of the factors under availability has significant p values. It means there is no significant difference in the responses from lesser user to user of OTC allopathic analgesic topical medicines.

Table 4.1.69 Statistical analysis between the less frequent users and more frequent users on the basis of accessibility

T-Test (Accessibility)

	group	Mean	Std. Deviation	mean diff	t-test	Significant value(p-value)
Prescription medicines are not always accessible.	frequently user	3.77	1.354	-.272	-1.990*	.047
	less user	4.04	1.483			
Purchasing of OTC allopathic analgesic topical medicine wouldn‘t be a option if prescription allopathic medicines are accessible.	frequently user	4.07	1.404	-.062	-.435	.664
	less user	4.14	1.566			
OTC allopathic analgesic topical medicine I can Easily access them within 1 km from my residence from grocery	frequently user	3.13	1.603	.341	2.151*	.032
	less user	2.79	1.665			
OTC allopathic analgesic topical medicine I can Easily access them within 1 km from my residence from pharmacy	frequently user	5.46	1.335	.082	.611	.542
	less user	5.38	1.429			
OTC allopathic analgesic topical medicine I can Easily access them within 1 km from my residence from general store	frequently user	3.81	1.692	.468	2.836*	.005
	less user	3.34	1.704			
OTC allopathic analgesic topical	frequently user	3.40	1.539	.479	3.288*	.001

medicine I can Easily access them within 1 km from my residence from shopping Mall	less user	2.93	1.430			
OTC allopathic analgesic topical medicine I can Easily access them within 1 km from my residence from online	frequently user	3.98	1.650	.155	.966	.335
	less user	3.82	1.643			

On the basis of the analysis of the variables of accessibility it has been found that

_Prescription medicines are not always accessible, OTC allopathic analgesic topical medicine accessible from grocery,

OTC allopathic analgesic topical medicine accessible from general store, OTC allopathic analgesic topical medicine accessible from shopping mall

have significant p values. Where the p values are .047, .032, .005 and .001 respectively. And the p values are less than 0.05 level of significance. And the t values are -1.990, 2.151, 2.836 and 3.288 respectively. This means there exist a considerable difference in opinion among lesser users and users on these four items. As higher t value indicates larger difference exist among four sample set, so the research conclude that among the four items identified under accessibility there is larger difference in opinion among lesser user and user on _OTC allopathic analgesic topical medicine I can easily access them within 1 km from my residence from shopping mall‘.

4.14 Comparison of findings of this study with that of the existing literature

The findings of the study with that of the existing literatures are explained over here. Since limited direct study had taken place in the area where the Theory of Planned Behavior has been used to understand the factors influencing consumer preferences for purchasing allopathic over the counter medicines under Indian context, so this comparison will help to identify whether there are any deviations from the existing research findings and the reason behind that.

Study published in the New England Journal of Medicine by Brass (2001) shows the availability of drugs on an over-the-counter basis for treating common aliment, including those previously available only by prescription, provides patients with improved access to effective therapies and rise in demand. Advances in technology may facilitate the growth of over-the-counter drug therapy. For example, the wide availability and acceptance of reliable methods for measuring serum cholesterol in nonmedical settings may eventually contribute to the safety and effectiveness of over-the-counter treatments for hyperlipidemia. Thus, the future promises increases in the number of drugs available over the counter and in the variety of indications for their use. In a similar way this research hypothesis 9, availability is more dominant factor than any other factors in Perceived Behavioural Control is proved to be significant. From the correlation table it is clear that significance of Availability (.861)> significance of Affordability (.482)> significance of Accessibility (.374)

Another popular study by Paschl and Taylor (1999) who had successfully used Theories of Reasoned Action and Planned Behavior for predicting intention of condom use. In the study condoms had showed minor correlations with intentions to use, whereas the average correlation between attitudes and intentions to use condoms (r- = .45) approached the strong characterization according to Cohen's (1992) guidelines which is understandable when one considers the structure of the TRA. The subjective norm component of the TRA received strong support to the attitude component (r = .42). Perceptions of social pressure from

significant others to use a condom were a highly reliable predictor of behavioral intentions. Kashima et al. (1993) conducted an analysis and found that sexual partner norms and subjective norms were both associated with intentions to use condoms. The average correlation between PBC is self efficacy and intentions to use condoms was positive and of medium magnitude across twenty four hypotheses (r, = .35). This value is similar to the average correlation obtained in Godin and Kok‘s (1996) review of eight studies of HIV-preventive behavior (r+ = 22) and suggests that PBC is a useful predictor of condom use intentions. Thus the meta analysis of twenty four studies evidence suggested that the TPB provided superior prediction of intentions to use condoms than the TRA. Which can be concluded that Theory of Planned Behavior can also be successfully applied in over the counter allopathic medicines determing the prediction of intention in consumer behavior.

Another meta-analysis on prospective prediction of health-related behaviors with the Theory of Planned Behaviour by McEachana (2011) has noted that subjective norms are the weakest predictor in the TPB (e.g., Armitage & Conner, 2001; Godin, Savard, Kok, Fortin, & Boyer, 1996; Hagger et al., 2002; Hausenblas et al., 1997). The subjective norm intention relationship was stronger for safer sex (as observed in other reviews; Albarracin et al., 2001, 2004) compared to detection, physical activity and abstinence behaviours and medicine purchase. These findings may provide useful guidance as this research also shows value correlation value for PBC is (.654) for attitude is (.432) and for subjective norms is (-.098).Where the value of subjective norm is lowest among all other variables.

Findings from the study of _The Theory of Planned Behavior: A Review of Its Applications to Health-related Behaviors‘ by Gaston and Kok (1995) shows that the theory performs very well for the explanation of intention; an averaged Re of.41 was observed. Attitude toward the action and perceived behavioral control were most often the significant variables responsible for this explained variation in intention. The prediction of behavior yielded an averaged Re of

.374. Half of the studies reviewed perceived behavioral control significantly added to the prediction.

Similarly in this research for Hypothesis 8 R value of _attitude and subjective norms‘ < R value of PBC, which could be conclude that Perceived behavioural control is more dominant than attitude and subjective norms in determining the behavioural intension.

From the analysis of the present research with that of findings of other studies shows the similar outcome. It can be concluded that use of Theory of planned behaviour for understanding the factors influencing consumer behaviour for over the counter allopathic medicine is well justified while attitude and subjective norms can be considered as important factors for influencing consumer behaviour. But perceived behavioural control is the most dominant among all other factors influencing consumer behaviour.

4.15 Summary

In this chapter a detailed description about the analysis of the data collected using the questionnaires is presented. At first, analysis of demographic pattern of the respondent has been done followed by minimization of factors with respect to the various independent variables by factor analysis. After that among the factors, prioritization was done using regression coefficient and the difference of independent variable was done using ANOVA. Also, the hypotheses formulated were tested using descriptive statistics and correlation regression to arrive at the results. Followed by statistical analysis of the difference between user and non-user. The chapter ends with comparison of findings of this study with that of the existing literature.

CHAPTER-V

RESULT, DISCUSSION & CONCLUSION

5.1 Overview

In this chapter researcher has discussed the major findings and managerial implications for the practitioners. The chapter also focused on the limitations and future scope for the study so that it may benefit the marketers, academics and practitioners.

5.2 Summary of Research Findings

There are limited number of research that have implemented the theory of planned behavior to understand the motivational factors influencing consumers for purchasing OTC allopathic analgesic topical medicine under the Indian context. The reliability and validity of the data have has been tested before proceeding for any statistical analysis. In order to meet the purpose of the study as envisaged in the earlier sections, factor analysis is used to know important factors which insist buyers to purchase OTC allopathic analgesic topical medicines. Concerning the facet - impact Outcome Belief towards purchase decision making process of OTC allopathic topical medicines factors such as; experience about OTC analgesic allopathic topical medicines plays a decisive role in decision making process followed by purchase of OTC analgesic allopathic topical medicine due to previous successful results. Relating to the relevance of outcome evaluation factors such as, quick relief in curing minor health problems, quick relief in curing chronic health problems, complete relief in minor health problems, provide no relief in curing major health problems, temporary relief in curing my chronic health problems plays the most important role. Attitudes are restricted to those that are salient and therefore easily brought to mind by consumers (Hegner,2017). Thus it can be conclude that overall attitude has a positive influence towards intention to purchase OTC allopathic analgesic topical medicine. These attitudes are more accessible, certain and based on more knowledge (Cooke and Sheeran, 2004). The more positive the attitude towards the

behaviour, higher should be the individual‘s intention to perform it (Armitage and Conner, 2001).

In the context of studying normative belief about consumer behavior for OTC allopathic topical medicine, it has been found that idea of purchasing OTC allopathic topical medicine is supported by friends, idea of purchasing OTC allopathic analgesic topical medicine is supported by colleagues, idea of purchasing OTC allopathic topical medicine is supported by networks on social media i.e. Facebook, Twitter etc. are the three important factors motivates the intention to purchase. Whereas pharmacists or retailers don‘t have significant influences among the factors under normative belief. Regarding motivation to comply; consumers feel motivated by the suggestion received from relatives with regards to OTC allopathic analgesic topical medicine plays important role. Under the factors of perceived behavioral control ; non availability of allopathic prescription medicine may cause to buy OTC allopathic topical medicine, OTC allopathic topical medicine wouldn‘t be a option if prescription allopathic medicines are accessible are the dominant factors.

One-Way ANOVA is used to know whether any facet of demographic profile of the consumers has significant impact on the purchasing behavior. Participatory observation method followed in uncovering the logic behind our findings reveals that demography has a nominal impact on consumer purchasing decision making process. In fact, it may be inferred that this variable is not apt for ascertaining frequency of purchase of OTC allopathic topical medicine .Out of the six facets of demographic profile considered, apart from income none of the factors like gender, age, education, qualification and family member has significant statistical relationship with OTC allopathic analgesic topical medicine purchase. Only income has considerable level of impact on OTC allopathic topical medicine purchase but in a negative direction. Which signify as the income rises consumers prefer more on prescription medicines from doctors and less willing to consume OTC allopathic analgesic topical

medicine. However, in-depth study on facet-wise demographic profile on preference may bring forth some exceptional result which may be considered for future research.

On the basis of the research findings from this study, it is inferred that, among all the factors which are categorized under the Theory of Planned Behaviour, perceived behavioral control is the most influencing one for purchasing OTC allopathic topical medicine . Of the different variables which are identified and analyzed under PBC the availability of the OTC allopathic analgesic topical medicines motivates the consumer most for their purchasing behavior. Similarly, attitude of the consumer also has significant influence in purchase decision making process. Whereas the factors under subjective norms has nominal influence in decision making process for purchasing OTC allopathic analgesic topical medicine.

While comparing the above mentioned results with that of the existing literature, the results obtained from this research are in line with that of the existing literature, except few cases of purchasing behaviour towards OTC allopathic analgesic topical medicines. While evaluating the differences among user to lesser user for outcome evaluation it has been observed that only _temporary relief in curing my minor health problems‘ under outcome evaluation exist a considerable difference in opinion among lesser users and users. Among the factors under normative belief it has been found that _my idea of purchasing OTC allopathic analgesic topical medicine is supported by my colleagues and my idea of purchasing OTC allopathic analgesic topical is supported by my networks on social media‘ have differences in opinion among the user and lesser users. This difference among user and lesser user is more prominent when the idea of purchasing is supported by social media for purchasing OTC allopathic analgesic topical medicines. Similarly under motivation to comply users and lesser users have differences in opinion when they received suggestion from social media. Among the items under affordability it has been found the differences among opinion among user and lesser user is based on _higher cost of remedy with prescribe allopathic medicines make me

to go for OTC allopathic analgesic topical medicines‘. Under availability there is no significant difference in the responses from lesser user to user of OTC allopathic analgesic topical medicines. For accessibility it has been found user and lesser user are differentiating themselves when they try to access OTC allopathic analgesic topical medicines within 1 km from their residence to shopping mall.

5.3 Application of the concept in management

The findings of the research will help the organizations to identify the key factors influencing consumer for purchasing allopathic over the counter medicines in the Indian market, more specifically in Hooghly districts in West Bengal. Also, it will help all the concerned persons to identify the factors which act as barriers for OTC allopathic analgesic topical medicine popularity and take corrective actions to overcome those barriers.

Some specific suggestions are listed below:-

1) In India large number of consumers lacks the ability to self-diagnose themselves accurately. Researchers have reported cases of inappropriate consumer use of nonprescription medicines, primarily involving misinterpretation and misuse. Some consumers are unable to interpret label information printed on product labels correctly and others delay medical treatment for a more serious underlying disease, overdose, by using nonprescription drugs chronically, which may lead to health damage or addiction. Marketer-dominated ones primarily build awareness and interest and sometimes educate consumers about OTC allopathic medicines so the companies who are involved in marketing and promotion of OTC allopathic analgesic topical medicines should take elaborative steps in consumer awareness programme about the usage of the drugs and indication of the therapeutic areas along with their adverse effect (if exist).

2) When consumers hold hesitant attitudes toward OTC allopathic analgesic topical medicines, high effort should be given by the marketers to remove the discomfort of the consumers regarding buying OTC allopathic analgesic topical medicines. So, while going for OTC allopathic analgesic topical medicines advertising, pharmaceutical companies should assess the ambivalence of their target consumers‘ attitude toward buying OTC allopathic analgesic topical medicines.

3) The research also helps to understand the varying behavior pattern between the urban and rural consumers. Study shows the availability of the OTC allopathic analgesic topical medicine is a significant factor for OTC allopathic analgesic topical medicines purchase. So OTC allopathic analgesic topical medicines should be made more available. The availability should target all the geographies starting from urban to rural areas.

4) Health care organizations can benefit by developing programs to promote greater consumer involvement in OTC allopathic medicine purchase decisions. Their target should be to run the programs to provide consumers with information about the importance of appropriate use of OTC allopathic medicine, and the role that accessible health professionals like pharmacists can help consumers with their nonprescription medicine purchases. Increasing consumer involvement in OTC allopathic medicine purchases will have an impact on health care costs in two ways.

   First, people who are lesser users of OTC allopathic medicines and mostly visit a physician instead of self-medicating with nonprescription medicines for the treatment of minor ailments can be targeted for campaigns to change their behavior and increase their involvement.

   Second, involvement in OTC allopathic medicine purchases increases the likelihood of consumers taking advice and information from expert sources such as physicians, pharmacists, and nurses. Such advice not only helps consumers make better

purchase decisions, but also ensures the safe and effective use of nonprescription medicines. This will reduce health care costs due to mishaps associated with the improper use or overuse of OTC allopathic analgesic topical medicines.

5) Research shows high physicians' fees, unable to pay for costly prescription drugs are the reasons that make the consumers move towards OTC allopathic analgesic topical medicines. Pharma companies should be aware of the pricing strategies as well as maintaining the quality of their products so that the consumers have that affordability to get rid of their health ailments at minimum cost.

6) Overall all, these steps will help the pharmaceutical companies to promote OTC allopathic analgesic topical medicines in a better way, which will ultimately increase their sales volume and reduce misuse and reduce health hazards of the consumers in long term. This will help the nation to provide cost-effective health care to its people in a more effective way.

7) The research showed that the association between brand loyalty and intention is not very significant. Hence the markets should identify the possible reasons about the low strength of association of brand loyalty with respect to satisfaction. This is necessary as it will help the marketer to take corrective measure and strengthen the level of consumer satisfaction, vis/a/vis market share of OTC allopathic analgesic topical medicine**.**

5.4 Limitations of the Research

Limitations of the research study are as follows:

- The research study is limited to respondents related to only over the counter allopathic medicines for analgesic topical segment products. The other types of OTC allopathic analgesic medicines users are not being studied in this research project.
- This research was conducted solely in Hooghly district of West Bengal. Therefore the composition of the sample may not be analogous to the wider OTC allopathic medicine consumer population due to the specific region used in the sampling technique. So, a large volume of samples and multinational studies are needed to investigate the hypothesis.
- The awareness about OTC allopathic analgesic topical medicines with respect to the consumers have changed dramatically during the research period. So, the population size of 441 may be not sufficient with respect to the current scenario.
- The research relies heavily on the Theory of Planned Behavior as a highly regarded framework for studying attitudes in respect to consumer behavior. Despite extensive effort to ensure the validity and reliability of the findings, some readers may be concerned with the predictability of behavior from attitude and intention. Although there are possible limitations of TPB (Sniehotta et al. 2014), the extended TPB and potential roles for variables allow researchers to work within a broader framework and to account for more variance in behaviour (Ajzen, 2015; Armitage, 2014).According to Bagozzi (1997), emotions also serve to motivate action, help in information processing and regulate consumption. More over Perugini and Bagozzi (2001) extend the TPB by incorporating desires as the proximal causes of intention, which mediate the effects of attitudes and subjective norms, so TBP could not be considered as an ultimatum to understand consumer behaviour.

- Branding is a vast chapter of consumer behaviour. So the amount of research done in the thesis to understand the influence of brands in understanding purchase intention is

not sufficient due to paucity of time and money. So an elaborate research is required in this regard.

5.5 Scope of future research

This exploratory study focused on consumer involvement in allopathic OTC allopathic medicine purchases in a particular therapeutic segment. Future research should investigate how the product category influenced consumer involvement in the purchase decision making process. The relationships among the factors—consumer involvement, the credibility of the source of information, compliance with a source's recommendations, and post-purchase satisfaction in relation to OTC allopathic analgesic topical medicine purchase and use— is not studied and needs to be investigated. Because consumer involvement can play a significant role in the appropriate use of OTC allopathic analgesic topical medicines, future research should focus on study methods for increasing involvement. And finally, research is needed to assess the extent of consumer involvement in other health care decisions including those related to developing good health habits, health promotion, and disease prevention.

One of the future directions of the research is represented by extending the study at the national level. Also, in future paper it would be interesting to study how consumer evaluates their health status and the correlation of this aspect with the frequency with which they buy OTC allopathic analgesic topical medicines with the budget they allocate for pharmaceuticals expenditure.

Among the 4 Ps‘ of marketing promotion plays an important role and brand loyalty plays a significant role in repurchase decision making process. A statistical analysis was also done related with brand loyalty, still the researcher is not satisfied with the depth of research related with brand loyalty due to paucity of time and fund. So an elaborative study is required to understand the influence of brand loyalty in OTC allopathic analgesic topical medicine.

Future researchers may create and develop new constructs to better reflect marketing evolution with changes in the lifestyle of consumers, emotional and enthusiastic affiliation to branded OTC allopathic analgesic topical medicines.

Pharmaceutical companies are constantly changing their marketing strategies towards retailers and chemist in order to promote their respective brands. So future research is required to track any changes in retailers level and how they will influence in consumer decision making process.

In the future role of physicians may change as more allopathic drugs become available over the counter. Certain types of encounters with patients may cease, and patients‘ expectations may change (Rosenau, 1998). Patients may no longer visit doctors up to a certain level of health complications and instead may rely more on over-the-counter drugs for initial therapy. To cope up with this faster change future research will become indispensable.

5.6 Conclusion:

The model, used for this research was based on past research and the authors‘ theoretical considerations. The Theory of Planned Behavior made a strong contribution towards explaining the factors influencing consumer decision for purchasing OTC allopathic analgesic topical medicines .This study is among the few, where TPB has been used to determine the consumer behavior for OTC allopathic analgesic topical medicines in Indian context which will be helpful for marketing managers and public-health policymakers to determine the future course of action. The thesis highlights the importance of identifying the various psychographic variables and demographic variables that act as positive motivators influencing the consumer decision making process, specifically for Hooghly district in and around of it. But, still now there are some important barriers that need to be tackled by the

pharmaceutical industry to establish OTC allopathic medicine market in a sustainable manner. The chapter also discusses the limitations, the contribution of the research findings and future scope of research which will actually lead to newer research for the flourishing market of over the counter allopathic medicines.

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Appendix 1 :

Questionnaire used for Final Physical Survey (Offline Mode)

Dear Respondent,

This questionnaire is prepared regarding a research activity related to PhD program at ICFAI University, Jharkhand on OTC allopathic analgesic topical medicine *. I shall be highly grateful if you can spare a few minutes to complete the questionnaire. The answers obtained will be kept confidential and will be used for academic purpose only [Note : *As per the Drugs and Cosmetics Act, 1940, and the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954, –Over-the-Counter‘ drugs or medicines are those that are legally allowed to be sold without the prescription of a Registered Medical Practitioner. Normally OTC allopathic analgesic topical medicines are covered under the Consumer Healthcare segment of pharma companies. They can even be said as those medicines that are not included in the list of _prescription drugs‘ but are considered as non-prescription drugs or OTC allopathic analgesic topical medicines.‖]

Name:-_____(Optional)

Location: - _____

Contact No.-_____(Optional)

Please tick (√) the correct option in all the questions. If you feel something else, please write your remark beside the relevant question

Part I :

General Information : Please provide the following details about yourself

1. Age (yrs): (i) 18 – 25 ( ) (ii) 26 – 35 ( ) (iii) 36 – 50 ( ) (iv) > 50 ( )

2. Gender: (i) Male ( ) (ii) Female ( )

3. Educational Qualification : (i) High School ( ) (ii) Graduate ( ) (iii) Post – Graduation ( ) (iv) Others _____

4. Occupation : (i) Student ( ) (ii) Business ( ) (iii) Service ( ) (iv) Housewife ( ) (v) Retired employee ( ) (vi) Others ( ) (vii) Never ( )

5. Income (monthly in Rs) : (i) <10,000 ( ) (ii) 10,000– 25,999 ( ) (iii) 25,000 – 50,000 ( ) (iv) 50,000 – 1,00,000 ( ) (v) >=1,00,000 ( )

6. Number of members in the household : (i) < 2 ( ) (ii) 2 – 4 ( ) (iii) >= 5 ( )

PART B: Consumer understanding on OTC allopathic analgesic topical medicine

7. Can you name the OTC allopathic analgesic topical medicine you have last purchased?

A. ---------- B. ----------

C. ---------- D. ----------

8. I used OTC allopathic analgesic topical medicine?

(i) Daily ( ) (ii) Once in a week ( ) (iii) Every fort night ( ) (iv) Once in a month ( ) (v) Bi monthly ( ) (vi) Once in quarter (every 3months) ( ) (vii) Yearly ( ) (viii) Never **( )**

From Q. 9 to Q. 11 and again from Q. 14 to Q. 18, the questions have been asked on a seven point scale where 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA). Please tick the right option (√)

9. Please indicate how strongly you agree or disagree to the following statements.

Factors	**Views**						
	Very	**Strongly**	**Disagree**	**Neither**	**Agree**	**Somewhat**	**Very**

	strongly disagree	disagree		agree or disagree		agree	strongly Agree
I purchase OTC allopathic analgesic topical medicine due to previous successful results.							
I am concerned about the safety profile of the OTC allopathic analgesic topical medicine							
I believe OTC allopathic analgesic topical medicine have efficacy as I desire							
My past experience about allopathic OTC allopathic analgesic topical medicine plays a role in purchase decision making process							
I would describe my thoughts & feelings towards OTC allopathic analgesic topical medicine as ambivalent							

10. Please indicate how strongly you agree or disagree to the following statements

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
OTC allopathic analgesic topical medicine provide **quick** relief in curing my **minor health problems**.							
OTC allopathic analgesic topical medicine provide **quick** relief in curing my **major health problems**							
OTC allopathic analgesic topical medicine provide **quick** relief in curing my **chronic health problems.**							
OTC allopathic analgesic topical medicine provide **complete** relief in curing my minor **health problems.**							
OTC allopathic analgesic topical medicine provide **complete** relief in curing my **major health problems.**							
OTC allopathic analgesic topical medicine provide **complete** relief in							

curing my **chronic health problems.**							
OTC allopathic analgesic topical provide **temporary** relief in curing **my minor health problems.**							
OTC allopathic analgesic topical medicine provide **temporary** relief in curing my **major health problems.**							
OTC allopathic analgesic topical medicine provide **temporary** relief in curing **my chronic health problems.**							
OTC allopathic analgesic topical medicine provide **no** relief in curing **my minor health problems.**							
OTC allopathic analgesic topical medicine provide **no** relief in curing **my major health problems**.							
OTC allopathic analgesic topical medicine provide **no** relief in curing **my chronic health problems.**							

11. **Please indicate how strongly you agree or disagree to the following statements**:

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
My idea of purchasing OTC allopathic analgesic topical medicine is supported by my parents							
My idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my relatives							
My idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my friends							
My idea of purchasing allopathic OTC							

allopathic analgesic topical medicine is supported by my colleagues							
My idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by my networks on social media i.e. Facebook, Twitter etc.							
My idea of purchasing allopathic OTC allopathic analgesic topical medicine is supported by local pharmacist							

12. Please tick any one from each row

I feel	**Highly motivated**	**Motivated**	**Neither motivated nor encouraged**	**Discouraged**	**Highly discouraged**	by the suggestions received from my parents with regards to OTC allopathic analgesic topical medicine
I feel	**Highly motivated**	**Motivated**	**Neither motivated nor encouraged**	**Discouraged**	**Highly discourage**	by the suggestions received from my relatives with regards to allopathic to OTC allopathic analgesic topical medicine
I feel	**Highly motivated**	**Motivated**	**Neither motivated nor encouraged**	**Discouraged**	**Highly discourage**	by the suggestions received from my friends with regards to allopathic to

						OTC allopathic analgesic topical medicine
I feel	**Highly motivated**	**Motivated**	**Neither motivated nor encouraged**	**Discouraged**	**Highly discouraged**	by the suggestions received from network of social media with regard to allopathic to OTC allopathic analgesic topical medicine
I feel	**Highly motivated**	**Motivated**	**Neither motivated nor encouraged**	**Discouraged**	**Highly discouraged**	by the suggestions received from local pharmacist with regard to to OTC allopathic analgesic topical medicine

13. For me availability of OTC allopathic analgesic topical medicine medicine is

(i) Very Easy ( ) (ii) Easy ( ) (iii) Not Easy ( ) (iv) Difficult ( ) (v) Very Difficult ( )

14. **Please indicate how strongly you agree or disagree to the following statements** :

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Non availability of allopathic prescription medicine may cause me to buy allopathic OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7

15. **Please indicate how strongly you agree or disagree to the following statements**:

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
One of the reasons for buying allopathic OTC allopathic analgesic	1	2	3	4	5	6	7

topical medicine is that prescription medicines are not always accessible							
For me purchasing of OTC allopathic analgesic topical medicine wouldn‘t be a option if prescription allopathic medicines are accessible.	1	2	3	4	5	6	7

16. If I want to access OTC ALLOPATHIC ANALGESIC TOPICAL MEDICINE, I can easily access them within 1 km from my residence

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Grocery store	1	2	3	4	5	6	7
Pharmaceutical store	1	2	3	4	5	6	7
General store	1	2	3	4	5	6	7
Shopping mall	1	2	3	4	5	6	7
Online	1	2	3	4	5	6	7

17. Please indicate how strongly you agree or disagree to the following statements:

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
The affordability of OTC allopathic analgesic topical medicine is completely under my control	1	2	3	4	5	6	7
Higher cost of remedy with prescribe allopathic medicines make me to go for OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
There are wide varieties of OTC allopathic analgesic topical medicine of different cost for single therapy	1	2	3	4	5	6	7
OTC allopathic analgesic topical medicine are cheaper than prescribed medicine	1	2	3	4	5	6	7

Good quality OTC allopathic analgesic topical medicine at lower price motivate me to purchase.	1	2	3	4	5	6	7

18. Factors that help me to overcome any barrier to purchase OTC ALLOPATHIC ANALGESIC TOPICAL MEDICINE

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Belief that I have about OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
Motivation received from my family, parents, friends, local pharmacist, social media etc.	1	2	3	4	5	6	7
Availability about allopathic OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
Accessibility about allopathic OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
Affordability about allopathic OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7

19. Brand Loyalty towards Purchase of OTC ALLOPATHIC ANALGESIC TOPICAL MEDICINE

Factors	**Views**				
	Very certain	**certain**	**No idea**	**un certain**	**Very uncertain**
I intent to repurchase same brand of OTC allopathic analgesic topical medicine in future	1	2	3	4	5

20. In overall view, I have

*strong favorable opinion about OTC allopathic analgesic topical medicine	favorable opinion about OTC allopathic analgesic topical medicine	un favorable opinion about OTC allopathic analgesic topical medicine	strongly un favorable opinion about OTC allopathic analgesic topical medicine	Neutral opinion

Thank you very much for your time

Appendix 2

Questionnaire used for pilot physical survey (Offline mode):-

Dear Respondent,

this questionnaire is prepared regarding a research activity related to PhD program at ICFAI University, Jharkhand on OTC allopathic analgesic topical medicine allopathic analgesic medicine*. I shall be highly grateful if you can spare a few minutes to complete the questionnaire. There is no right or wrong answers to the questions. Answers given by you will be kept confidential and used for academic purpose only.

[Note : *As per the Drugs and Cosmetics Act, 1940, and the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954, –Over-the-Counter‘ drugs or medicines are those that are legally allowed to be sold without the prescription of a Registered Medical Practitioner. Normally over the counter drugs are covered under the Consumer Healthcare segment of Pharma companies. They can even be said as those medicines that are not included in the list of _prescription drugs‘ are considered as non-prescription drugs or OTC allopathic analgesic topical medicine.‖]

Please supply the following details about yourself:-

1. Age:

   A. 18 – 25 ( )

   B. 26 – 35 ( )

   C. 36 – 50 ( )

   D. > 50 ( )

2. Gender:

A. Male ( )

B. Female ( )

1. Educational qualification:

A. High School

B. Graduate

C. Post – Graduation

D. Others _____

4. Occupation:

A. Student ( )

B. Business ( )

C. Service ( )

D. Housewife ( )

E. Retired employee ( )

F. Others ( )

5. Income (monthly):

A. <25,000 ( )

B. 25,000– 49,999 ( )

C. 50,000 – 74,999 ( )

D. 75,000 – 99,999 ( )

E. >=1,00,000 ( )

6. Have you used OTC allopathic analgesic topical medicine?

A ( ) A lot

B( ) Sometime

C ( )Not too much

D( )Don‘t know

7. Can you name the OTC allopathic analgesic topical medicine or medicines you have last purchased?

B. .....

C. .....

D. .....

E. .....

8. What is your monthly expenditure on OTC allopathic analgesic topical medicine in your house hold?

   A ( ) < than Rs. 100

   B ( ) From Rs.100 to Rs 500

   C ( )From Rs 500 and above

   D ( ) Any thing else please specify_____

9. How many members are there in your household?

   A ( )2

   B ( )2 to 4

   C ( )4 to 6

   D ( )6 and above

10. Your consumption of pharmaceutical OTC allopathic analgesic topical medicine has----------- in compare to last year.

    ( ) Increased

    ( ) Decreased

    ( ) Remain same

11. Please arrange them in a rank order sequence.

[1 for most frequently purchase and 8 for least purchase.]

For what type of ailments you purchase OTC allopathic analgesic topical medicine?

A ( ) Orthopedic pain or muscle pain

B ( ) Cough & cold problem

C ( ) Digestive problem

D ( ) Skin problem

E ( ) Health supplements

F ( ) First aid & antiseptic purpose

G ( ) Gynecological issues.

H ( )Sexual Vitality supplements.

12. According to you OTC allopathic analgesic topical medicines are

A. ( ) more available than prescription medicines

B. ( )equally available to prescription medicines

C. ( ) less available than prescription medicines

13. From where do you have last purchased the OTC allopathic analgesic topical medicine?

A ( ) From a pharmaceutical shop

B ( ) From a grocery store.

C ( ) From online shopping.

14. If from a grocery store then why?

A ( ) Pharmaceutical shop is far away from my location.

B ( ) Its‘ only in kirana stores I get OTC allopathic analgesic topical medicine

C ( ) Available in both retail as well as pharmaceutical.

D ( )Unable to purchase through online shopping.

15. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Sometimes due to unavailability of prescription medicine I have to purchase OTC allopathic analgesic topical medicine?	1	2	3	4	5	6	7

16. With whom you feel more comfortable to discuss with related to medical advice at initial stage?

A ( ) Pharmacist.

B ( )Community health workers.

C ( )Para medics staff.

D ( ) Doctor.

E ( ) Other non medical professionals

17. In many parts of India it is found pharmacist guided people to purchase medicine, what according to you are the possible reason people follow their advice?

A ( ) Pharmacist or para medics are quite expertise to solve the medical issues.

B ( )They have more medicine selling experience .

18. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
As there are no doctors available nearby so I have consumed OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
Due to longer waiting time for Drs I have to consume OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
I have purchased OTC allopathic analgesic topical medicine from prior assumption of the Drs prescription.	1	2	3	4	5	6	7

19. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
I am aware about the usage information	1	2	3	4	5	6	7
I know the active ingredients of the medicine	1	2	3	4	5	6	7
I know the warning information about the medicine	1	2	3	4	5	6	7
When the problem is not eradicated I consume more than recommended dosage.	1	2	3	4	5	6	7

20. In comparison to pharmaceutical medicine OTC allopathic analgesic topicalmedicines are:

	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Powerful	1	2	3	4	5	6	7
Reliable	1	2	3	4	5	6	7
Easy to use	1	2	3	4	5	6	7

Higher efficacy	1	2	3	4	5	6	7

21. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Higher cost of remedy for medical advice make me to go for OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
There are wide varieties of OTC allopathic analgesic topical medicines of different cost for single therapy	1	2	3	4	5	6	7
OTC allopathic analgesic topical medicines are cheaper than prescribed medicine	1	2	3	4	5	6	7

22. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

Factors	Views						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Last time I purchase a brand of OTC allopathic analgesic topical medicine due to recommendation from my friends & relatives	1	2	3	4	5	6	7
My past experience helped me in purchasing the OTC allopathic analgesic topical medicine last time	1	2	3	4	5	6	7

23. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

    I can easily recall a particular brand name of OTC allopathic analgesic topical medicine

Factors	Views						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Due to perception efficacy of the product	1	2	3	4	5	6	7
Due to repeated advertisement I used to see about the product	1	2	3	4	5	6	7

Due to packaging of the product	1	2	3	4	5	6	7
Due to wider availability of that particular brand	1	2	3	4	5	6	7
Advertisement of OTC allopathic analgesic topical medicines brand helped me to recall them during the time of purchase	1	2	3	4	5	6	7

24. On a seven point scale (i.e. 1 = Very Strongly Disagree(VSD), 2 = Strongly Disagree(SD) , 3 = Disagree(D) , 4 = Neither Agree Nor Disagree(NAD) , 5 = Agree(A) , 6 = Strongly Agree(SA) , 7 = Very Strongly Agree(VSA)) , please indicate how strongly you agree or disagree to the following statements.

    A.

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
I have more trust on the brand than the molecule of a OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
I am ready to pay more on a well known brand of OTC allopathic analgesic topical medicine	1	2	3	4	5	6	7
I feel risky if I move for a lesser known OTC allopathic analgesic topical	1	2	3	4	5	6	7

medicine brand as I am less familiar with brand name							

25. What is your overall experience about using OTC allopathic analgesic topical medicinal products?

Factors	**Views**						
	VSD	**SD**	**D**	**NAD**	**A**	**SA**	**VSA**
Use of OTC allopathic analgesic topical medicine has provided me satisfaction.	1	2	3	4	5	6	7

26. What are the possible reasons for your satisfaction or dissatisfaction?

A..... B.....

Publications and Presentations:

1. Aniruddha Bhowmick, (2016), Rural India –an untapped Goldmine for Pharmacutical Industry, *IUJ Journal of Management*, 4(1), 63-66. (UGC listed journal)

2. Aniruddha Bhowmick and Mridanish Jha, (2017), A Study of Consumer Behaviour Towards Over The Counter Allopathic Medicines Using Integrated Behavioural Model, *International Research Journal of Management Science and Technology*, Vol 8,Issue *6, 112-123.(* UGC listed journal)

Paper Presentation at International Conference:

1. 11th NASMEI Conference 2017. ‒Analysis Of The Reasons For The Sales Of Sexual Vitality Supplements Along With The Health Hazards Associated With It And Steps To Be Taken To Govern Such Sale in India‖