TO STUDY THE MARKET ANALYSIS OF ACNE CONTROLLING AND HAIR GROWING/HAIR FALL CONTROLLING BRANDS

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INSTITUTE OF HEALTH MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

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TO WHOMSOEVER MAY CONCERN

This is to certify that **Mr. HEMANT NAGAR** student of MBA Pharmaceutical Management from IIHMR University; Jaipur has undergone internship training at The IIHMR University, Jaipur from February 2015 to April 2015.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

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This is to certify that the dissertation titled "To study the market analysis of acne controlling & hair fall controlling /hair growing brands" submitted by HEMANT NAGAR under the supervision of Dr. SEEMA MEHTA for award of MBA Pharmaceutical Management of the university carried out during the period from February 2015 to April 2015 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

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Chapter 1

Acne is a chronic skin condition that affects most people at some point during their life. It causes spots to develop on the skin, usually on the face, back and chest. The symptoms of acne can be mild, moderate or severe. Acne is thought to be caused by changes in hormones that are triggered during puberty. Acne can cause great distress and have an adverse effect on a person's quality of life and self-esteem. Therefore, healthcare professionals recognize that the condition requires effective and sometimes aggressive treatment. Acne is common and is usually treatable. You may need treatment for several months to clear spots. Inflamed acne needs to be treated early to prevent scarring. Once the spots are gone, you may need maintenance treatment for several years to keep the spots away.

- Acne is the most common type of skin condition. It is most widespread among older children, teenagers and young adults.

- Around 80% of 11 to 30-year-olds are affected by acne. Most acne cases in girls occur between the ages of 14 to 17, and in boys the condition is most common in 16 to 19- year-olds.

- Most people will experience repeated episodes, or flare-ups, of acne for several years before finding that their symptoms gradually start to improve as they get older. The symptoms of acne usually disappear when a person is in their twenties.

- However, in some cases, acne can continue into adult life, with approximately 5% of women and 1% of men over 25 continuing to experience symptoms.

- With treatment, the outlook for acne is generally good. Treatments can take between two to three months to work but, once they do, the results are usually effective.

➢ Approximately 90% of people who seek treatment for acne will show at least a 50% improvement in their symptoms after three months. Once the symptoms are under control, additional treatments can be used to prevent the acne from recurring. This is known as maintenance therapy.

➢ In cases of severe acne, scarring can occur. However, this can usually be prevented by seeking prompt treatment.

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➢ Acne is the common cause of spots. Most people with acne are aged between 12 and 25 but some older and younger people are affected. Boys are more commonly affected than girls. Acne usually affects the face but may also affect the back, neck and chest. The severity can range from mild to severe. About 8 in 10 teenagers develop some degree of acne. Often it is mild. However, it is estimated that about 3 in 10 teenagers have acne bad enough to need treatment to prevent scarring. Untreated acne usually lasts about 4-5 years before settling. However, it can last for many years in some cases.

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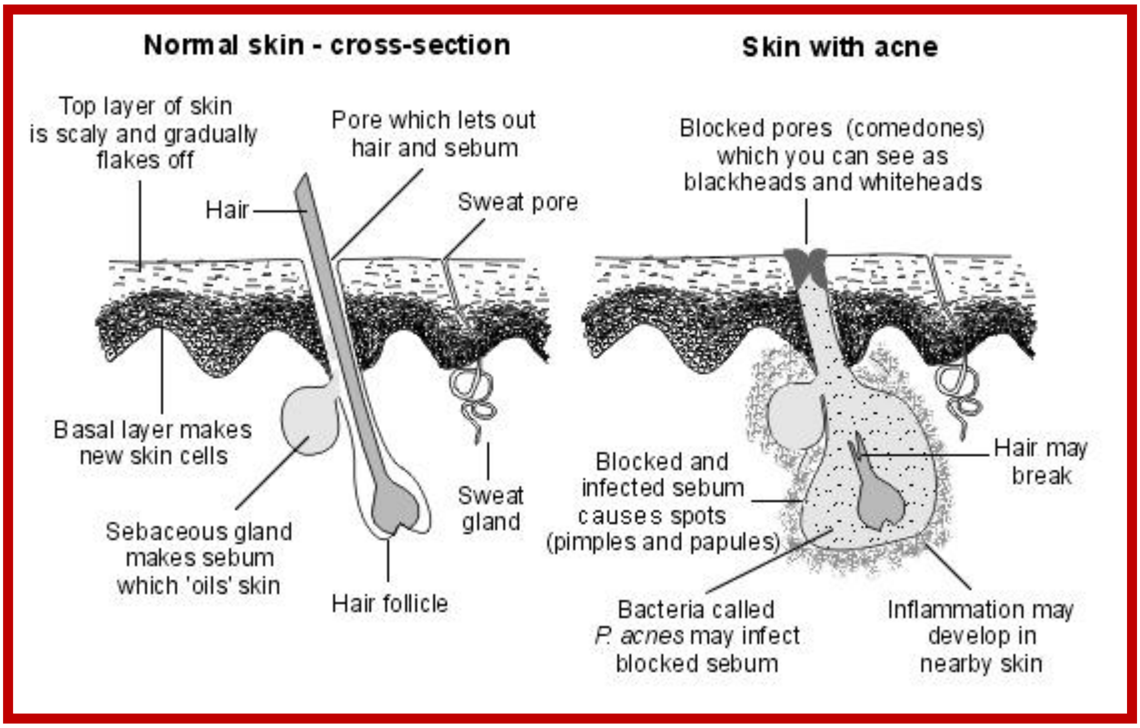

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Acne Types

There are various types of acne and they are:-

- Acne Rosacea
- Acne Cosmetica
- Acne Vulgaris
- Acne Fulminans
- Acne Keloidalis Nuchae
- Acne Chloracne
- Acne Medicamentosa

Acne vulgaris is the most common type of skin disease condition.

ACNE VULGARIS

Acne vulgaris is one of the commonest skin disorders which dermatologists have to treat, mainly affect adolescents, though it may present at any age. Acne by definition is multifactorial chronic inflammatory disease of pilosebaceous units. Various clinical presentations include seborrhea, comedones, erythematous papules and pustules, less frequently nodules, deep pustules or pseudo cysts, and ultimate scarring in few of them. Acne has four main pathogenetic mechanism—increased sebum productions, follicular hyper keratinization, Propionibacterium acne (P. acne) colonization, and the products of inflammation.

Treatment of the acne vulgaris:-

1) Topical therapy

Topical therapy is useful in mild and moderate acne, as monotherapy, in combination and also as maintenance therapy:-

A. Benzoyl peroxide

It is an effective topical agent since many years and is available in different formulations (washes, lotions, creams, and gels) and concentrations (2.5–10%).

The stability is very dependent on its vehicle. Gels are generally more stable and active and water-based gel being less irritant is more preferred over creams and lotions. Benzoyl

peroxide is a broad spectrum bactericidal agent which is effective due to its oxidizing activity.

The drug has an anti-inflammatory, keratolytic, and comedolytic activities, and is indicated in mild-to-moderate acne vulgaris. Clinicians must make a balance among desired concentration, the vehicle base, and the risk of adverse effects, as higher concentration is not always better and more efficacious.

The main limitation of benzoyl peroxide is concentration dependent cutaneous irritation or dryness and bleaching of clothes, hair, and bed linen. It can induce irritant dermatitis with symptoms of burning, erythema, peeling, and dryness. This occurs within few days of therapy and mostly subsides with continued use.

[illegible]

Retinoids have been in use for more than 30 years. Topical retinoids target the micro comedo–precursor lesion of acne. There is now consensus that topical retinoid should be used as the first-line therapy, alone or in combination, for mild-to-moderate inflammatory acne and is also a preferred agent for maintenance therapy.

Its effectiveness is well documented, as it targets the abnormal follicular epithelial hyper proliferation, reduces follicular plugging and reduces micro comedones and both non inflammatory and inflammatory acne lesions. Their biological effects are mediated through nuclear hormone receptors (retinoic acid receptor RAR and retinoids X receptor RXR with three subtypes α, β, and γ) and cytosolic binding proteins. Retinoic acid metabolism blocking agents (RAMBAs) such as liarozole have been developed recently to overcome the emergence of all-*trans*-retinoic acid resistance.

Tretinoin, adapalene, tazarotene, isotretinoin, metretinide, retinaldehyde, and β-retinoyl glucuronide are currently available topical retinoids. The most studied topical retinoids for acne treatment worldwide are tretinoin and adapalene. There is no consensus about relative efficacy of currently available topical retinoids (tretinoin, adapalene, tazarotene, and isotretinoin). The concentration and/or vehicle of any particular retinoid may impact tolerability. Adapalene was generally better tolerated than all other retinoid with which it was compared. Tretinoin has recently become available in formulations with novel delivery systems which improves tolerability. One such product Retin-A Micro (0.1% gel) contains tretinoin trapped within porous copolymer microspheres. The tretinoin is incorporated within

a polyol pre-polymer (PP-2). Each of the theses formulations releases tretinoin slowly within the follicle and onto the skin surface, which in turn reduces irritancy with the same efficacy.

The main adverse effects with topical retinoid is primary irritant dermatitis, which can present as erythema, scaling, burning sensation and can vary depending on skin type, sensitivity, and formulations.

[illegible]

Many topical antibiotics formulations are available, either alone or in combination. They inhibit the growth of P. acne and reduce inflammation. Topical antibiotics such as erythromycin and clindamycin are the most popular in the management of acne and available in a variety of vehicles and packaging. Clindamycin and erythromycin were both effective against inflammatory acne in topical form in combination of 1–4% with or without the addition of zinc. An addition of topical 2% zinc sulfate and nicotinamide was no different than placebo for the treatment of acne. Topical clarithromycin, azithromycin, and nadifloxacin are available in India, but trials for their efficacy and safety are lacking.

Side effects though minor includes erythema, peeling, itching, dryness, and burning, pseudomembranous colitis which is rare, but has been reported with clindamycin. A most important side effect of topical antibiotics is the development of bacterial resistance and cross resistance; therefore, it should not be used as monotherapy.

[illegible]

[illegible]Benzoyl peroxide has the advantage to prevent and eliminate the development of P. acne resistance. Therefore it is being more preferred as combination therapy. Its efficacy and tolerability are enhanced when combined with topical erythromycin or clindamycin, confirmed on various trials. Benzoyl peroxide can be combined with tretinoin and found to be superior to monotherapy. Both the molecules should not be applied simultaneously as benzoyl peroxide may oxidize tretinoin. A combination of topical retinoid and topical antimicrobial is more effective in reducing both inflammatory and non-inflammatory acne lesions than either agent used alone. Topical clindamycin and benzoyl peroxide applied once daily and fixed clindamycin phosphate 1.2% and tretinoin 0.025% in aqueous-based gel formulation used once daily are both found to be effective treatment for

acne. Addition of zinc acetate to clindamycin and erythromycin gel showed equivalent efficacy but probably reduces the development of microbial resistance.

□□□□□□□□□□□□It has been used for many years in acne as a comedolytic agent, but is less potent than topical retinoid.

□□□□□□□□□□: It is available as 10–20% topical cream which has been shown to be effective in inflammatory and comedonal acne.

□□□□□□□□□□□□□□□□□□□□: It is found to be helpful in preventing and reduction of acne lesion counts.

□□□□□□□□□□□□□ □Initial clinical response with this preparation is inevitably slower compared to other treatment modalities.

□□□□□□□□□□□□□□□□□□□ □It is an intermediate metabolite of the amino acid, tryptophan. It has antiviral, antibacterial, and immune modulatory properties. When applied twice daily for 12 weeks found to be effective in both type of acne lesions, but further trials are needed to confirm its safety and efficacy.

□□□□□□□□□□□□ □It is a sulfone with anti-inflammatory and antimicrobial properties. The trials have confirmed that topical dapsone gel 5% is effective and safe as monotherapy and in combination with other topical agents in mild-to-moderate acne vulgaris.

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Oral antibiotics are indicated in mainly moderate-to-severe inflammatory acne. Tetracyclines and derivatives still remain the first choice. Macrolides, co-trimoxazole and trimethoprim are other alternatives for acne. The following agents should not be used in acne due to lack of efficacy and safety consideration such as cephalosporins, sulphonamide, and gyrase inhibitors.

Tetracycline (500 mg–1 g/day), doxycycline (50–200 mg/day), minocycline (50–200 mg/day), lymecycline (150–300 mg/day), erythromycin (500 mg–1 g/day), co-trimoxazole, trimethoprim, and recently azithromycin (500 mg thrice weekly) are being used successfully in acne. Minocycline and doxycycline are more effective than tetracycline and erythromycin.

Recently, doxycycline in sub antimicrobial dose (20 mg twice daily) and an extended-release minocycline tablet (1 mg/kg/day) were used and found to be effective, but further controlled trials are needed.

Gastrointestinal upset and vaginal candidiasis is most common side effects. Doxycycline can be associated with photosensitivity. Minocycline may produce pigment deposition in the skin, mucous membrane, and teeth. Autoimmune hepatitis, systemic lupus erythematosus-like syndrome, and serum sickness-like reactions occur rarely with minocycline.

Long-term therapy with oral antibiotic not only threat to resistant of P. acne, but also to coagulase negative staphylococci on the skin, Staphylococcus aureus in the nares, and streptococci in the oral cavity. There is a significant association between antibiotic used in acne and the incidence of upper respiratory tract infection.

3) [illegible]: Research has demonstrated that problem of antibiotic-resistant P. acne is increasing, and it is most common with erythromycin. Therefore there is need to consider for antibiotic prescribing policies and to advocate the use of non-antibiotic preparations wherever possible.

- Antibiotic monotherapy is to be avoided and it can be combined with topical retinoid or benzoyl peroxide as per need.
- Wherever possible the duration of therapy should be limited. The usual minimum duration of therapy is 6–8 weeks but can be given up to 12–18 weeks and more.
- It is advisable to use the same antibiotic if retreatment is necessary and use benzoyl peroxide for a minimum of 5–7 days between antibiotic courses to reduce resistant organism.
- Concomitant use of oral and topical therapy with chemically dissimilar antibiotics is to be avoided.

[illegible]

It may be needed in female patients with severe seborrhea, clinically apparent androgenic alopecia, seborrhea/acne/hirsutisms/alopecia (SAHA) syndrome, late-onset acne (acne tarda), and with proven ovarian or adrenal hyper androgenism.

The main approach of hormonal therapy in acne is to prevent the effects of androgens on the sebaceous gland and probably follicular keratinocytes as well. It is wiser to take consultation with gynecologist before starting therapy.

Oral contraceptives

Estrogen is commonly combined with progestin to avoid the risk of endometrial cancer. Anti-acne effect of oral contraceptive governed by decreasing level of circulatory androgens through inhibition of luteinizing hormones (LH) and follicle stimulating hormone (FSH). The currently FDA approved agents include norgestimate with ethinyl estradiol, and nor ethindrone acetate with ethinyl estradiol.

Spironolactone

They functions primarily as a steroidal androgen receptor blocker. It may cause hyperkalemia (when higher doses are prescribed or when there is cardiac or renal compromise), menstrual irregularities.

Flutamide

It is the first androgen receptor blocking agent to be well studied and found to effective in acne in females. Higher doses have been found to be more effective than lower dose. It is also combined (2 mg) with ethinyl estradiol (35 or 50 μg) as an oral contraceptive formulation to treat acne.

Finasteride

It is useful in acne when given in females with hirsuitism.

Oral retinoid

Oral retinoid is indicated in severe, moderate-to-severe acne or lesser degree of acne producing physical or psychological scarring, unresponsive to adequate conventional therapy. It is the only drug that affects all four pathogenic factors implicated in the etiology of acne.

Although there are many studies, but very large evidence-based study is lacking to confirm the dosing schedule. The approved dose is 0.5–2 mg/kg/day, which is usually given for 20 weeks. Alternatively, lower dose can be used for longer period, with a total cumulative dose

of 120 mg/kg. New developments and future trends are low-dose long-term isotretinoin regimens and new isotretinoin formulations (micronized isotretinoin).

Side effects include those of musculoskeletal, mucocutaneous, and ophthalmic systems, as well as headache, and central nervous system effects. Most of the side effects are temporary and resolves after the drug is discontinued. Oral isotretinoin is a potent teratogen. Therefore women of child-bearing age require negative pregnancy test before treatment, strict contraceptive measures essential before, during and even 6 weeks post therapy. Due to this, in United States, a new risk management programme (iPLEDGE) has been developed where all the patients receiving this drug have to register.

[illegible]

[illegible]

[illegible]

Both open and closed comedones can be removed mechanically with comedone extractor and a fine needle or a pointed blade. Pre-procedure topical retinoid application makes the procedure easier. Gentle cautery and laser puncture of macrocomedones are also useful procedure. The limitations of comedo extraction include incomplete extraction, refilling, and the risk of tissue damage.

[illegible]

Aspiration of deep inflamed lesion may be needed in few cases which are followed by IL steroid injection in cysts and sinus tract.

[illegible]

[illegible]

They are indicated for mild-to-moderate inflammatory acne. In vitro and in vivo exposure of acne bacteria to 405–420 nm of ultraviolet free *blue light* results in the photo-destruction through the effect on the porphyrin produced naturally by *P. acne*. Use of limited spectrum wavelength, such as blue light (peak at 415 nm), and mixed blue and red light (peak at 415 and 660 nm) have been found to be effective in reducing acne lesions after 4–12 weeks.

With addition of δ-aminol evulinic acid) and pulsed dye laser (585 nm) were also effective in acne, but further trials are needed to confirm the same.

Acne scar can be broadly divided into two groups, those involving tissue losses (Ice pick scar, Box scar, Rolling scar, and Follicular macular atrophy) and those involving tissue excess (hypertrophic scars or keloids). Currently available treatment for scars include simple excision, and suturing, either alone or combined with punch grafting and laser resurfacing, dermabrasion, various type of lasers, chemical peels, and fillers. For hypertrophic scars, treatment includes pressure therapy, IL corticosteroid, 5-fluorouracil and bleomycin injections, surgical excision, radiotherapy, laser therapy and cryotherapy.

All the procedures have their own merits and demerits; to be chosen carefully seeing the merit.

- The progestogen-only contraceptive pill may make acne worse.
- In women, the hormonal changes around the monthly period may cause a flare-up of spots.
- Thick or greasy make-up may, possibly, make acne worse. However, most make-up does not affect acne. You can use make-up to cover some mild spots. Non-comedogenic or oil-free products are most helpful for acne-prone skin types.
- Picking and squeezing the spots may cause further inflammation and scarring.
- Sweating heavily or humid conditions may make acne worse. For example, doing regular hot work in kitchens. The extra sweat possibly contributes to blocking pores.
- Spots may develop under tight clothes. For example, under headbands, tight bra straps tight collars, etc. This may be due to increased sweating and friction under tight clothing.
- Some medicines can make acne worse. For example, phenytoin (which some people take for epilepsy) and steroid creams and ointments that are used for eczema. Do not stop a prescribed medicine if you suspect it is making your acne worse but tell your doctor. An alternative may be an option.

- Anabolic steroids (which some bodybuilders take illegally) can make acne worse.
- It used to be thought that diets high in sugar and milk products made acne worse but research has failed to find evidence to support this.

Some myths and wrongly held beliefs about acne:-

- Acne is not caused by poor hygiene. In fact, excessive washing may make it worse.
- Stress does not cause acne.
- Acne is not just a simple skin infection. The cause is a complex interaction of changing hormones, sebum, overgrowth of normally harmless germs (bacteria), inflammation, etc (described above). You cannot catch acne - it is not passed on through touching (contagious).
- Acne cannot be cured by drinking lots of water.
- There is no evidence to say that sunbathing or sunbeds will help to clear acne.
- Some people believe that acne cannot be helped by medical treatment. This is not true. Treatments usually work well if used correctly.

❖ Some of most considering brands regarding acne which are available in the market:-

❖ Isotroin tablet, 10mg, 20mg
❖ Isogold tablet 10mg, 20mg
❖ Isopril
❖ Deriva CMS
❖ Retino-a
❖ Acnecin lotion
❖ Tretiva

[illegible]

Alopecia is the general medical term for hair loss. There are many types of hair loss with different symptoms and causes.

Some of the more common types of hair loss are described below, including:

1) Male and Female-pattern baldness
2) Alopecia reata
3) Scarring alopecia
4) Anagen effluvium
5) Telogen effluvium

[illegible]

Male pattern hair loss is the most common type of hair loss, affecting around half of all men by 50 years of age. It usually starts around the late twenties or early thirties and most men have some degree of hair loss by their late thirties.

It generally follows a pattern of a receding hairline, followed by thinning of the hair on the crown and temples, leaving a horseshoe shape around the back and sides of the head. Sometimes it can progress to complete baldness, although this is uncommon.

Male-pattern baldness is hereditary, which means it runs in families. It's thought to be caused by oversensitive hair follicles, linked to having too much of a certain male hormone.

As well as affecting men, it can sometimes affect women (female-pattern baldness). During female-pattern baldness, hair usually only thins on top of the head.

It's not clear if female-pattern baldness is hereditary and the causes are less well understood. However, it tends to be more noticeable in women who have been through the menopause (when a woman's periods stop at around age 52), perhaps because they have fewer female hormones.

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Alopecia areata causes patches of baldness about the size of a large coin. They usually appear on the scalp but can occur anywhere on the body. It can occur at any age, but mostly affects teenagers and young adults.

In most cases of alopecia areata, hair will grow back in a few months. At first, hair may grow back fine and white, but over time it should thicken and regain its normal colour. Some people go on to develop a more severe form of hair loss, such as:

- alopecia totalis (no scalp hair)
- alopecia universalis (no hair on the scalp and body)

Alopecia areata is caused by a problem with the immune system (the body's natural defence against infection and illness). It's more common among people with other autoimmune conditions, such as an overactive thyroid (hyperthyroidism), diabetes or Down's syndrome.

It's also believed some people's genes make them more susceptible to alopecia areata, as one in five people with the condition have a family history of the condition.

Alopecia areata can occur at any age, although it's more common in people aged 15-29. It affects one or two people in every 1,000 in the UK.

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Scarring alopecia, also known as cicatricial alopecia, is usually caused by complications of another condition. In this type of alopecia, the hair follicle (the small hole in your skin that an individual hair grows out of) is completely destroyed. This means your hair won't grow back.

Depending on the condition, the skin where the hair has fallen out is likely to be affected in some way.

Conditions which can cause scarring alopecia include:

- scleroderma – a condition affecting the body's connective (supporting) tissues, resulting in hard, puffy and itchy skin
- lichen planus – an itchy rash affecting many areas of the body

- discoid lupus – a mild form of lupus affecting the skin, causing scaly marks and hair loss
- [illegible] – a rare form of alopecia that most commonly affects men, causing baldness and scarring of the affected areas
- [illegible] – a type of alopecia that affects post-menopausal women where the hair follicles are damaged, and the hair falls out and is unable to grow back

Scarring alopecia occurs in both males and females, but is less common in children than adults. It accounts for about 7% of hair loss cases.

[illegible]

Anagen effluvium is widespread hair loss that can affect your scalp, face and body.

One of the most common causes of this type of hair loss is the cancer treatment chemotherapy. In some cases, other cancer treatments – including immunotherapy and radiotherapy – may also cause hair loss.

The hair loss is usually noticeable within a few weeks of starting treatment. However, not all chemotherapy drugs cause hair loss and sometimes the hair loss is so small it's hardly noticeable.

It may be possible to reduce hair loss from chemotherapy by wearing a special cap that keeps the scalp cool. However, scalp cooling is not always effective and not widely available.

In most cases, hair loss in anagen effluvium is temporary. Your hair should start to grow back a few months after chemotherapy has stopped.

[illegible]

Telogen effluvium is a common type of alopecia where there is widespread thinning of the hair, rather than specific bald patches. Your hair may feel thinner, but you're unlikely to lose it all and your other body hair isn't usually affected.

Telogen effluvium can be caused by your body reacting to:

- hormonal changes, such as those that take place when a woman is pregnant

- intense emotional stress
- intense physical stress, such as childbirth
- a short-term illness, such as a severe infection or an operation
- a long-term illness, such as cancer or liver disease
- changes in your diet, such as crash dieting
- some medications, such as anticoagulants (medicines that reduce the ability of your blood to clot) or beta-blockers (used to treat a number of conditions, such as high blood pressure)

In most cases of telogen effluvium, your hair will stop falling out and start to grow back within six months

❖ [illegible]

[illegible]

Male-pattern baldness isn't usually treated, as the treatments available are expensive and don't work for everyone.

Two medicines that may be effective in treating male-pattern baldness are:

- Finasteride
- Minoxidil

[illegible]

Finasteride is available on private prescription from your GP. It comes as a tablet you take every day.

It works by preventing the hormone testosterone being converted to the hormone di hydro testosterone (DHT). DHT causes the hair follicles to shrink, so blocking its production allows the hair follicles to regain their normal size.

Studies have suggested finasteride can increase the number of hairs people have (hair count) and can also improve how people think their hair looks.

It usually takes three to six months of continuously using finasteride before any effect is seen. The balding process usually resumes within six to 12 months if treatment is stopped.

Side effects for finasteride are uncommon. Less than one in 100 men who take finasteride experiences a loss of sex drive (libido) or erectile dysfunction (the inability to get or maintain an erection).

[illegible]

Minoxidil is available as a lotion you rub on your scalp every day. It's available from pharmacies without a prescription. It's not clear how minoxidil works, but evidence suggests it can cause hair regrowth in some men.

The medication contains either 5% or 2% minoxidil. Some evidence suggests the stronger version (5%) is more effective. Other evidence has shown this is no more effective than the 2% version. However, the stronger version may cause more side effects, such as dryness or itchiness in the area it's applied.

Like finasteride, minoxidil usually needs to be used for several months before any effect is seen. The balding process will usually resume if treatment with minoxidil is stopped. Any new hair that regrows will fall out two months after treatment is stopped. Side effects are uncommon.

[illegible]

Minoxidil is currently the only medicine available to treat female-pattern baldness.

Minoxidil lotion may help hair grow in around one in four women who use it, and it may slow or stop hair loss in other women. In general, women respond better to minoxidil than men. As with men, you need to use minoxidil for several months to see any effect.

[illegible]

[illegible]

Corticosteroids are medicines containing steroids, a type of hormone. They work by suppressing the immune system (the body's natural defence against infection and illness).

This is useful in alopecia areata because the condition is thought to be caused by the immune system damaging the hair follicles.

Corticosteroid injections appear to be the most effective treatment for small patches of alopecia. As well as your scalp, they can also be used in other areas, such as your eyebrows.

A corticosteroid solution is injected several times into the bald areas of skin. This stops your immune system from attacking the hair follicles. It can also stimulate hair to grow again in those areas after about four weeks. The injections are repeated every few weeks. Alopecia may return when the injections are stopped.

Side effects of corticosteroid injections include pain at the injection site and thinning of your skin (atrophy).

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Topical corticosteroids (creams and ointments) are widely prescribed for treating alopecia areata, but their long-term benefits are not known.

They are usually prescribed for a three-month period. Possible corticosteroids include:

- Betamethasone
- Hydrocortisone
- Mometasone

These are available as a lotion, gel or foam depending on which you find easiest to use. However, they cannot be used on your face, for example on your beard or eyebrows.

Possible side effects of corticosteroids include thinning of your skin and acne.

Corticosteroids tablets aren't recommended because of the risk of serious side effects.

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Minoxidil lotion is applied to the scalp and can stimulate hair regrowth after about 12 weeks. However, it can take up to a year for the medication to take full effect.

Minoxidil is licensed to treat both male- and female-pattern baldness, but is not specifically licensed to treat alopecia areata. This means it hasn't undergone thorough medical testing for this purpose.

Minoxidil is not recommended for those under 18 years old. It's not available on the NHS, but can be prescribed privately or bought over the counter.

[illegible]

Immunotherapy may be an effective form of treatment for extensive or total hair loss, although fewer than half of those who are treated will see worthwhile hair regrowth.

A chemical solution called diphencyprone (DPCP) is applied to a small area of bald skin. This is repeated every week using a stronger dose of DPCP each time. The solution eventually causes an allergic reaction and the skin develops mild eczema (dermatitis). In some cases, this results in hair regrowth after about 12 weeks.

A possible side effect of immunotherapy is a severe skin reaction. This can be avoided by increasing the DPCP concentration gradually. Less common side effects include a rash and patchy-coloured skin (vitiligo). In many cases, the hair falls out again when treatment is stopped.

Immunotherapy is only available in specialised centres. You'll need to visit the centre once a week for several months. After DPCP has been applied, you'll need to wear a hat or scarf over the treated area for 24 hours because light can interact with the chemical.

[illegible]

Similar to immunotherapy, dithranol cream is applied regularly to the scalp before being washed off. It causes a skin reaction, followed by hair regrowth in some cases.

However, it hasn't been proven that dithranol cream is significantly effective in the long term. It can also cause itchiness and scaling of the skin and can stain the scalp and hair. For these reasons, dithranol is not widely used.

[illegible]

Two to three sessions of light therapy (phototherapy) are given every week in hospital. The skin is exposed to ultraviolet (UVA or UVB) rays. In some cases, before your skin is exposed to UV light you may be given a medicine called psoralen, which makes your skin more sensitive to the light.

The results of light therapy are often poor. The treatment can take up to a year to produce maximum results and responses vary, with a high relapse rate. It's often not a recommended treatment because side effects can include:

- nausea (feeling sick)
- pigment changes to the skin
- an increased risk of skin cancer

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]

Chapter 2

Isotretinoin is currently authorized in the UK for the treatment of severe forms of acne (such as nodular or conglobated acne or acne at risk of permanent scarring) which is resistant to adequate courses of standard therapy with systemic anti-bacterial and topical therapy. Isotretinoin (13-cis-retinoic acid) is a member of the retinoid class of compounds. Vitamin A (retinol) is a fat soluble molecule that has potent effects on growth and differentiation of epithelial tissues and is critical for the proper maintenance of epithelial integrity and structure. Chemically, isotretinoin is the 13-cis isomer of alltrans-retinoic acid (tretinoin) and an endogenous derivative of Vitamin A.

Isotretinoin is the only acne medication known to affect the four pathogenic factors of acne. It is comedolytic, reduces the sebaceous gland size (by up to 90%), decreases sebum production which in turn inhibits Propionibacterium acnes and therefore reduces the inflammation associated with acne (Brelsford et al 2008). The precise pharmacological mechanism of action of isotretinoin is not known. Isotretinoin has low affinity for retinoic acid receptors (RAR) and retinoid X receptors (RXR). It is believed that isotretinoin exerts its action by isomerisation to all-transretinoic acid which then interacts with these receptors. A number of animal and cell line studies have been published which investigate the mechanism of action of isotretinoin; however, none have been verified in vivo. Isotretinoin, a naturally occurring metabolite of vitamin A, inhibits sebaceous gland differentiation and proliferation, reduces sebaceous gland size, suppresses sebum production, and normalizes follicular epithelial desquamation. Isotretinoin is indicated in severe nodular acne and acne unresponsive to other therapies. It is used at a dosage of 0.5 to 1 mg/kg per day with a cumulative dosage of 120 to 150 mg/kg over a 4- to 6-month treatment period.

Minoxidil (Rogaine) is a vasodilator. It was originally used as the oral drug Loniten to treat hypertension, and discovered to cause hair growth as a side effect. Upjohn received FDA approval to market a topical solution that contained 2% minoxidil as Rogaine, marketed outside the United States as Regaine.

It is effective at both the front and scalp vertex. In a 12-month study, vertex improvements were seen in 51% of men using 5% minoxidil, 42% using 2% minoxidil, and 13% of placebo users. Moderate to great increases in hair growth were seen in the frontal scalp regions of 19% of men using 5% minoxidil, 10% using 2% minoxidil, and 3% of placebo. Although a mitogen for dormant telogen follicles, minoxidil can cause hairs in later phases of the cell cycle to shed early. This is often followed by growth of new, thicker hairs. The mitogenic effect is temporary and does not appear to change follicular structure, leading to indefinite minoxidil application to maintain growth. The use of minoxidil without propylene glycol as a minoxidil delivery vehicle can reduce itching, scaling and flaking dandruff reaction caused by the propylen glycol.Minoxidil can also be combined with other active ingredients such as tretinoin.

The increasing amount of research and development in the field has caused a surge in the number of products claiming to tackle the hair loss. Rogaine, Kirkland minoxidil, Lipogaine are some of the popular hair loss products that contain minoxidil.

□ □□□□□□□□□□ □□□□□□□□

Minoxidil 2% is shown to be significantly more effective than placebo. It has been shown to reduce hair loss and induce new hair growth in females with FPHL consistently.

□ □□□□□□□□□□ □□ □□□□□□□□□

Both 2% and 5% minoxidil are statistically superior to placebo, but 5% minoxidil was unable to consistently demonstrate an enhanced efficacy to 2% minoxidil. In a few small studies 5% minoxidil was superior to the 2% minoxidil. The 5% minoxidil did have an increased rate of scalp irritation, pruritus, and hypertrichosis. Both consistently showed moderate to dense hair re-growth.

□

□

□

□

□

Chapter 3

3) OBJECTIVE

- To find out the chemist area wise in Jaipur where the products are available regarding acne controlling & hair controlling.
- To study the SWOT analysis of acne controlling & hair growing market.
- To find out the Market leader regarding acne controlling.
- To find out the market leader regarding hair growing/hair fall control.

Chapter 4

- In which area products are available regarding acne controlling & hair growing?
- What are strengths, weaknesses, opportunity & threats in the market regarding acne controlling & hair growing brands?
- Who is the market leader regarding acne controlling?
- Who is the market leader regarding hair growing?

Chapter 5

5) RESEARCH METHODOLOGY

Step 1 : Listing and mapping of retailers selling the products of both categories

Listing of retailer area wise was done in Jaipur city who were keeping acne controlling brands & hair growing / hair fall brand.

Step 2 : Secondary data was used to identify the acne control and hair fall control. Further secondary data was used to carry out a

Step 3:

RESEARCH DESIGN

Regarding the study a market survey was designed which was moreover an exploratory study. The Study is based on secondary and primary data. Field research was done to identify and map the retailer's area wise who were keeping the brands of both category. Further this study further explore, what is the current market scenario of acne controlling brands & hair fall controlling brands who is the market leader in this segment from chemists. For analyzing the data MS excel was used.

- Research area:- SMS Hospital, Raja park, Malviya Nagar, Pratap Nagar, Vidyadhar Nagar
- Study duration:- Two months
- Sample frame:- Chemist shops
- Sample population: - chemist of the selected research area.
- Sample size:- 70
- Tool used for data collection:- Semi structured questionnaire(For primary data)
- Tool used for data analysis:- Microsoft Excel
- Data collection technique: - Face to Face Interview & telephonic.

Chapter 6

S.NO.	CHEMIST NAME(RESPONDENTS)	AREA
1	Shiv Medicals	SMS Hospital
2	Capital Medicoz	SMS Hospital
3	Sarvodaya	SMS Hospital
4	Medicure centre	SMS Hospital
5	Medicine Centre	SMS Hospital
6	Hind Medicals	SMS Hospital
7	Kiran Medicals	SMS Hospital
8	Sona Medicals	SMS Hospital
9	Jaina Medicals	SMS Hospital
10	Ashok Kumar Medicals	SMS Hospital
11	Adinath Medical Store	SMS Hospital
12	Bharat Medicals	SMS Hospital
13	Sharma Medicals	SMS Hospital
14	New Medicals	SMS Hospital
15	Rajasthan Medicals	SMS Hospital
16	Kochman Medicals	SMS Hospital
17	Home Medicals	SMS Hospital
18	Redicure	SMS Hospital
19	S.I.medicals	SMS Hospital
20	Om Medicals	SMS Hospital
21	Heena Medical Store	SMS Hospital
22	Vishal Medical	SMS Hospital
23	Vinayak Medical	SMS Hospital
24	Hindustan Medical	SMS Hospital
25	Hari Om Medicals	SMS Hospital
26	Surana Medical	SMS Hospital
27	Vijay Medicals	SMS Hospital
28	Heera Medical Store	SMS Hospital
29	Harsh Medical Store	SMS Hospital

30	Jain Medicals	Raja Park
31	Aggrawal Medicals	Raja Park
32	Nu Medical Store	Raja Park
33	Ashwini Medical Store	Raja park
34	Mahalaxmi Medical Store	Raja Park
35	Ankur Medical Store	Raja Park
36	Mahindra Medical	Raja Park
37	Kishor Medical Store	Raja Park
38	Medline Medicals	Raja Park
39	Vikas Medical Store	Raja Park
40	Medilife Care	Raja Park
41	Simmi Medical	Raja park
42	Manoj Medical Store	Raja park
43	Mohit Medical Store	Raja park
44	Sanjay Medicoz	Pratap Nagar
45	Raj Shree Medicals	Pratap Nagar
46	Khandelwal Medical Store	Pratap Nagar
47	Hariyana Medical Agency	Pratap Nagar
48	Jyoti Medical Store	Malviya Nagar
49	Ujjwal Medical Store	Malviya Nagar
50	Annapurna Medical & Provision Store	Malviya Nagar
51	Koral Medical & Provision Store	Malviya Nagar
52	Bohra Medical Store	Malviya Nagar
53	Shiv Medicals	Malviya Nagar
54	Sethi Medicals	Malviya Nagar
55	Sun Pharmacy	Malviya Nagar
56	Sampurna Medicals	Malviya Nagar
57	Shreegirdhar Medical Centre (Shree Girdhar Hospital)	Malviya Nagar
58	Pinky Medical Hall	Vidyadhar Nagar
59	R.D.Medicose	Vidyadhar Nagar
60	Shree Shyam Medicos	Vidyadhar Nagar
61	Laxmi Medical and Provison Store	Vidyadhar Nagar
62	M. K. Medical	Vidyadhar Nagar
63	Shiv Shakti Medical	Vidyadhar Nagar
64	Shree Ram Medical	Vidyadhar Nagar

65	Shree Ram Medical Store	Vidyadhar Nagar
66	Khadelwal Medical	Vidyadhar Nagar
67	Mittal Medical and General Store	Vidyadhar Nagar
68	Shree Balaji Medical and Provison Store	Vidyadhar Nagar
69	Kapil Medical and Provision Store	Vidyadhar Nagar
70		

6.2NAME OF POTENTIAL DOCTORS AREAWISE IN JAIPUR

ACCORDING TO THE CHEMIST:

AREAWISE	DOCTORS NAME
Malviya Nagar	Dr.Rishi Bhargav
Bapu Nagar	Dr.Punit Bhargav, Dr. N.K. Mathur,Dr.Deepak Mathur
Vidyadhar Nagar	Dr.Sanjay Mittal, Dr.Shakshi Gupta, Dr. Anshu Jain
Raja Park	Dr. Saroj Purohit
Bernis Colony	Dr.Ankit Kothari
Mahatama Ghandhi	Dr.Ram Gulati

6.3 SWOT ANALYSIS

The table 1 and 2 presents the swot analysis of [illegible]

[illegible]

[illegible]

[illegible]

[illegible]	[illegible]
1. Wide range of products and good availability & distribution. 2. One of the Most growing segment [illegible]	1. Stiff segment with a lot of brands competing for market share 2. Limited penetration in some of the major growing economies[illegible]
[illegible]	[illegible]
1.Senior citizen population is a large growing market segment which should be given focus 2.A potential huge market has been spotted on men cosmetic sales[illegible]	1. Presence of strong competition 2.Unstable demand-price ratio 3.Price war with other brands[illegible]

[illegible]

[illegible]

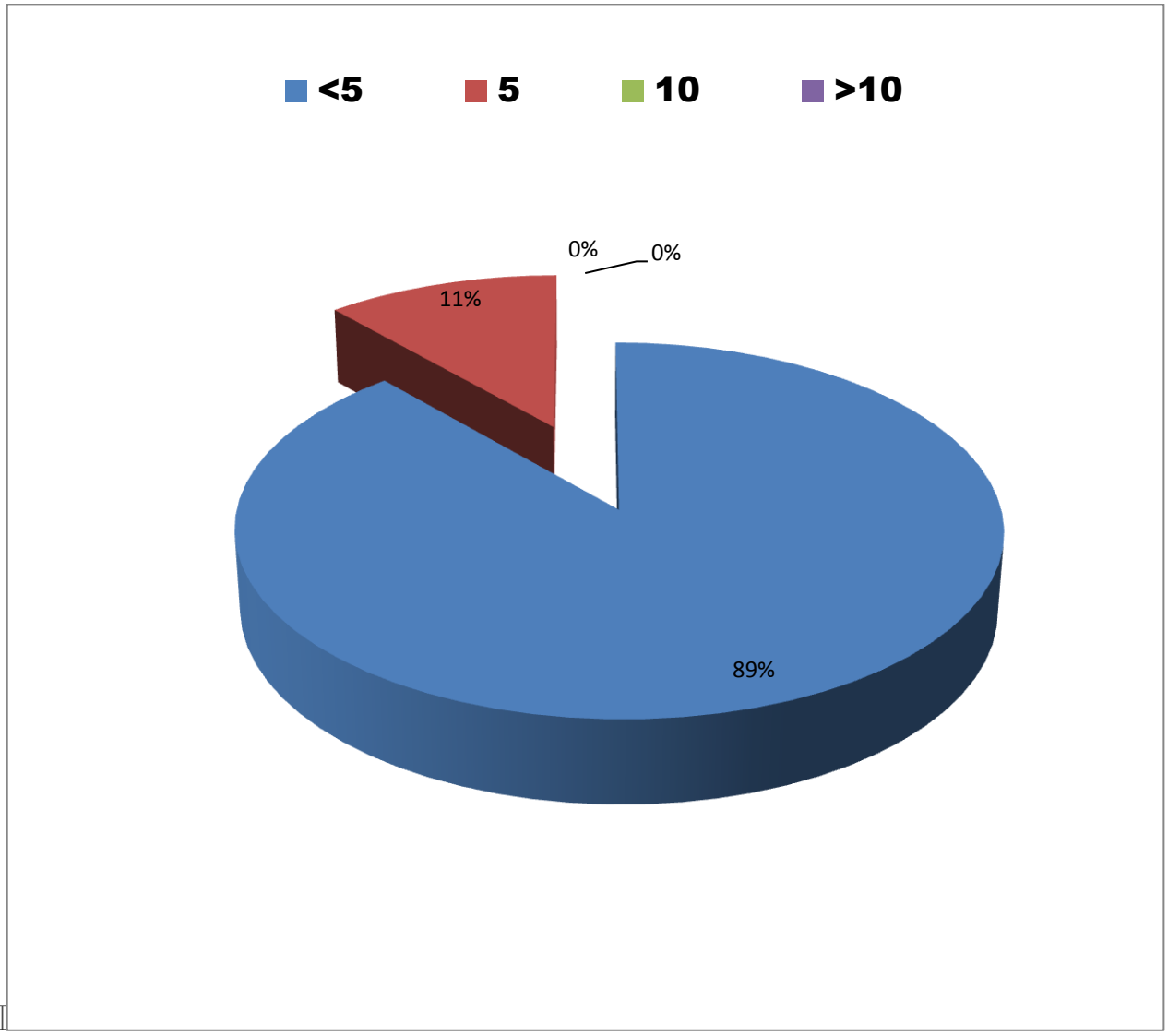
[illegible]

[illegible]	[illegible]
1. High quality products. 2. One of the Most growing segment[illegible]	1. Market share is limited due to presence of strong competition 2. More emphasis needs to be put on increasing reach of product[illegible]
[illegible]	[illegible]
1. Can also launch shampoo and conditioner of same brand.[illegible]	1.Plenty of competitors 2.Almost no differentiation 3.ayurvedic treatment [illegible]

[illegible]

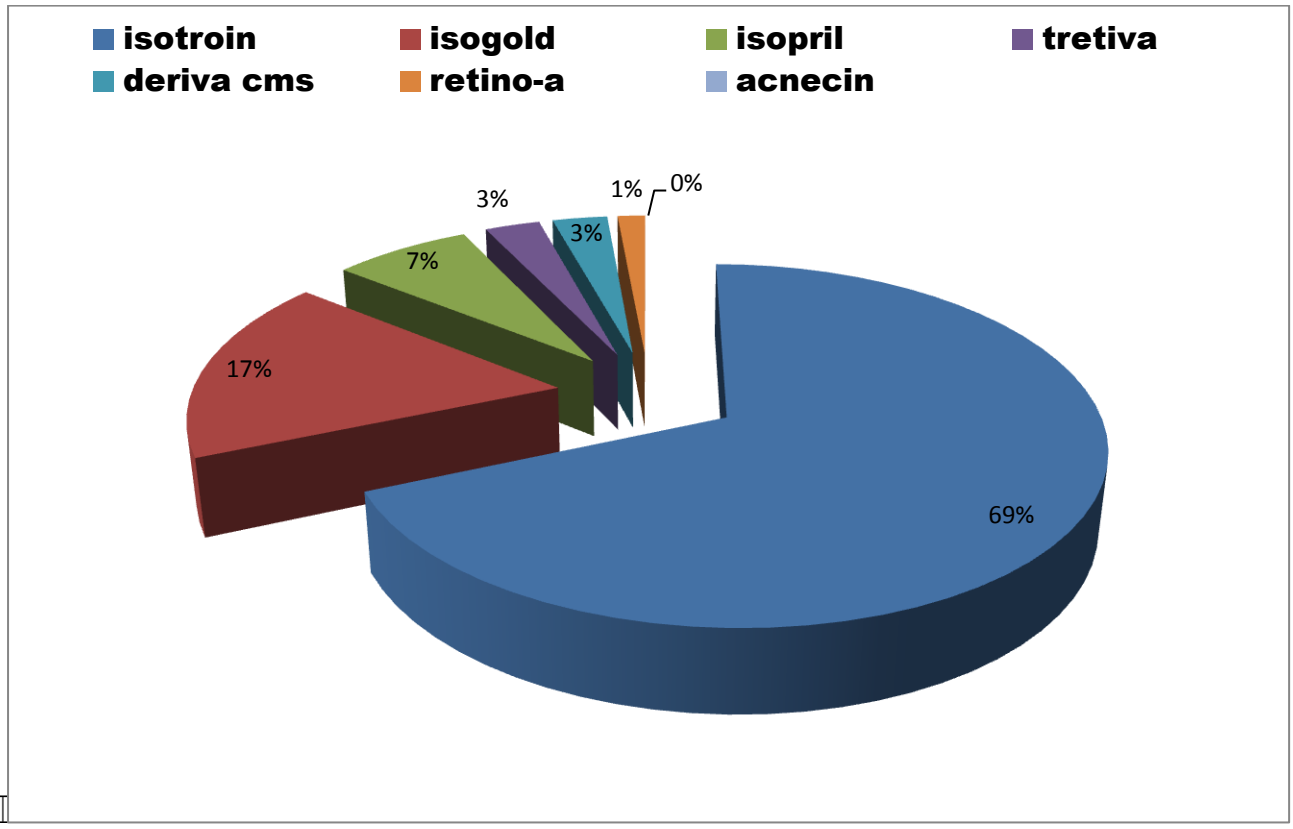
Chapter 7

Total Respondents	<5	5	10	>10
70	62	8	0	0



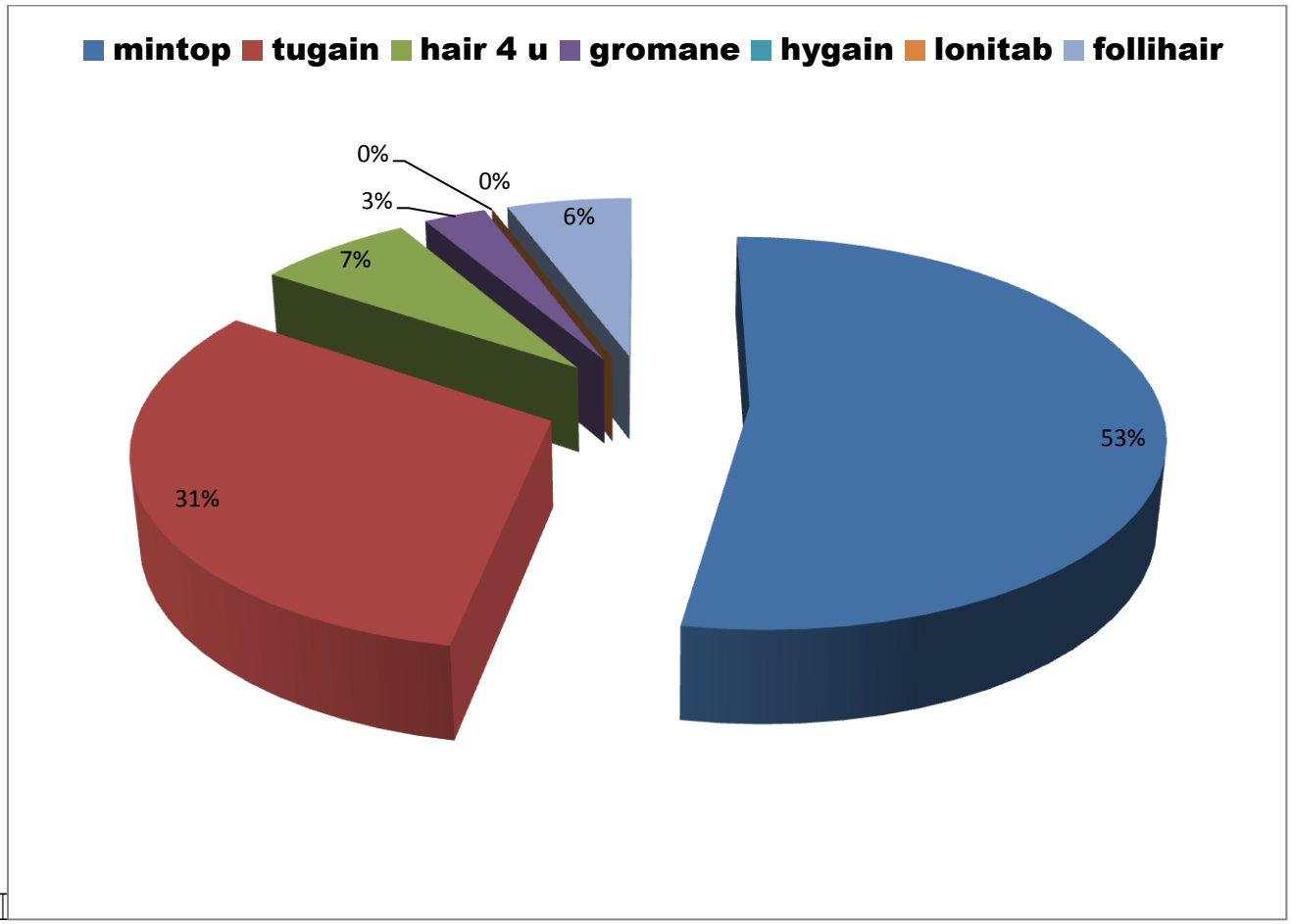
As per the analysis of given above chart no 1 has been cleared that 89% of the chemist has received minimum 1to 5 prescription per day & remaining 11% of the chemist received 5 or more than 5.

Total Respondents	70
Isotroin	48
Isogold	12
Isopril	5
Tretiva	2
Deriva CMS	2
Retino-A	1
Acnecin	0



As per the analysis of given above chart no 2 it has been cleared that Isotroin was the market leader in the acne controlling brand. 69% of the chemist went with Isotroin, 17% of chemist went with Isogold, 7% of chemist went with Isopril & remaining 3, 3% chemist went respectively with Tretiva & Deriva cms brands.

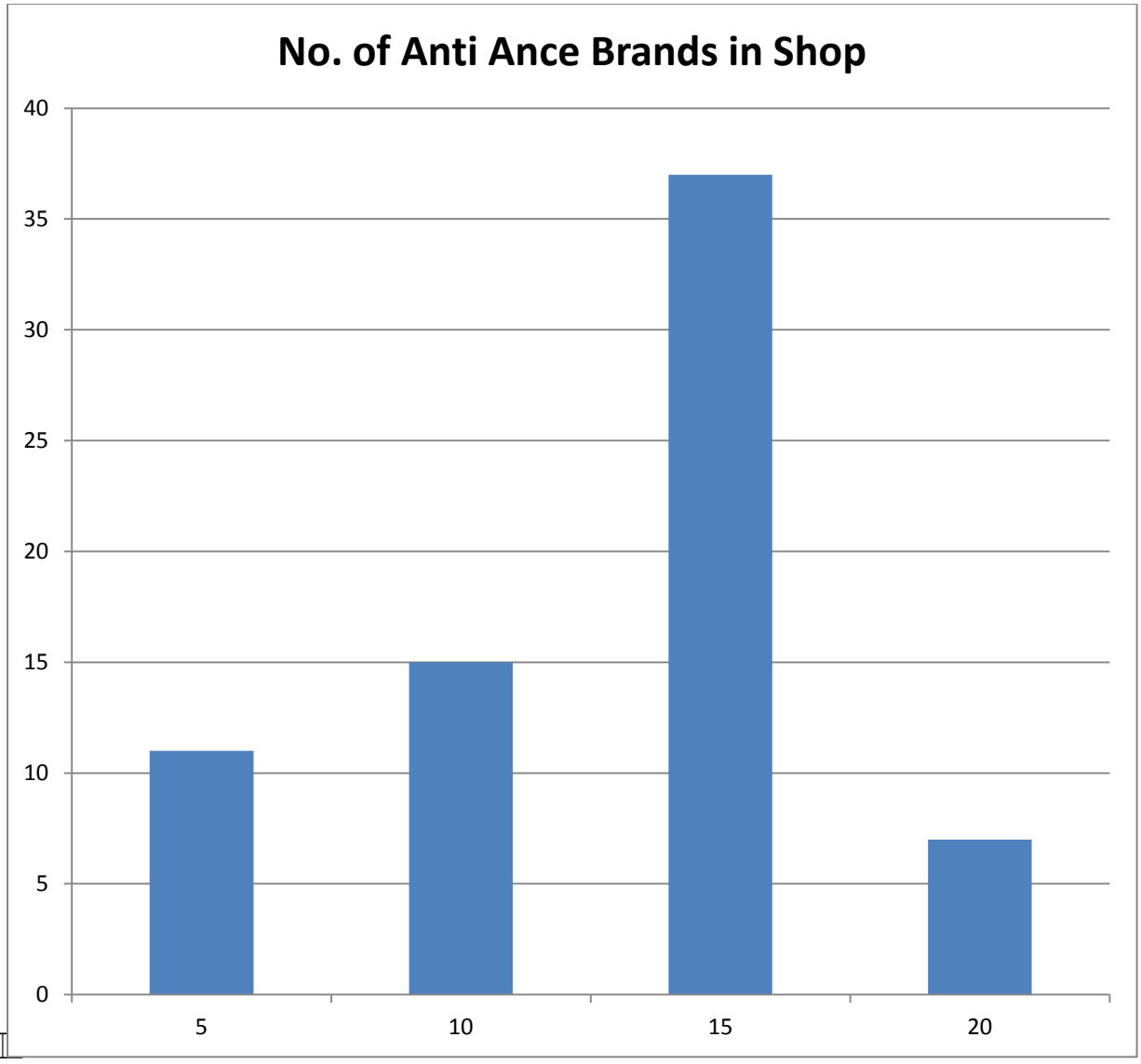
Total Respondents	70
Mintop	37
Tugain	22
Hair 4 u	5
Gromane	2
Hygain	0
Lonitab	0
Follihair	4



As per the analysis of given above chart no 3, it has been cleared that Mintop was the market leader in the hair fall controlling segment. There was 53% of the chemist went with the Mintop, 31% of chemist went with Tugain, 7% of the chemist went with hair 4 u, 3% of the chemist went with Gromane & remaining 6% of the chemist went with Follihair.

Total Respondents	5	10	15	20
70	11	15	37	8

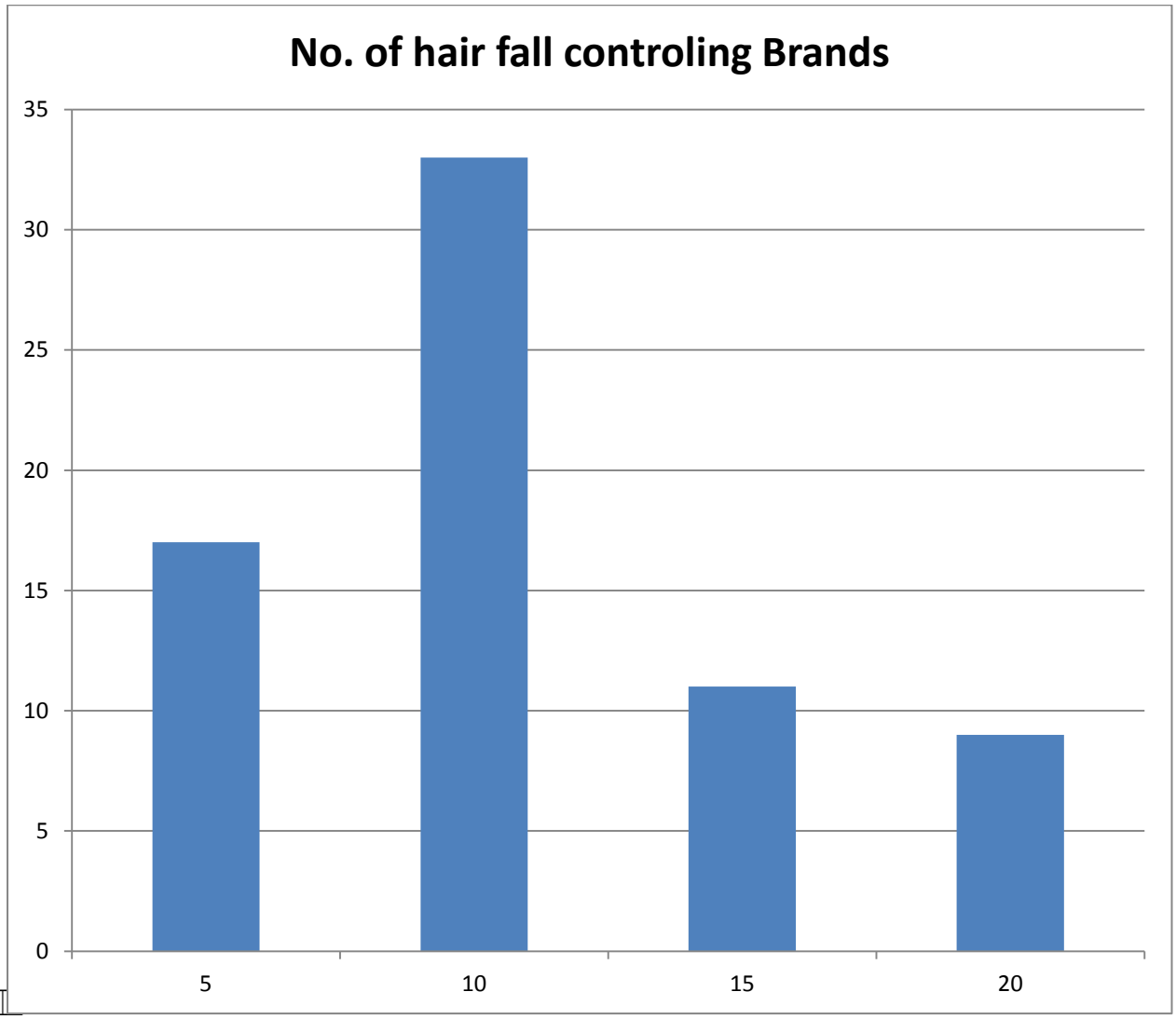
TABLE NO 6



As per the analysis of given above chart no 4 there was 37 chemist went with 15 means they had 15 or more than 15 types of brands in their shop regarding acne controlling brands, 15 chemist had 10 types of acne brands in their shop, 11 chemist had atleast 5 or more than 5 of acne brands in their shop & remaining 8 chemist had 20 or more than 20 acne controlling brands out of 70 in their shop

Total Respondents	5	10	15	20
70	17	33	11	9

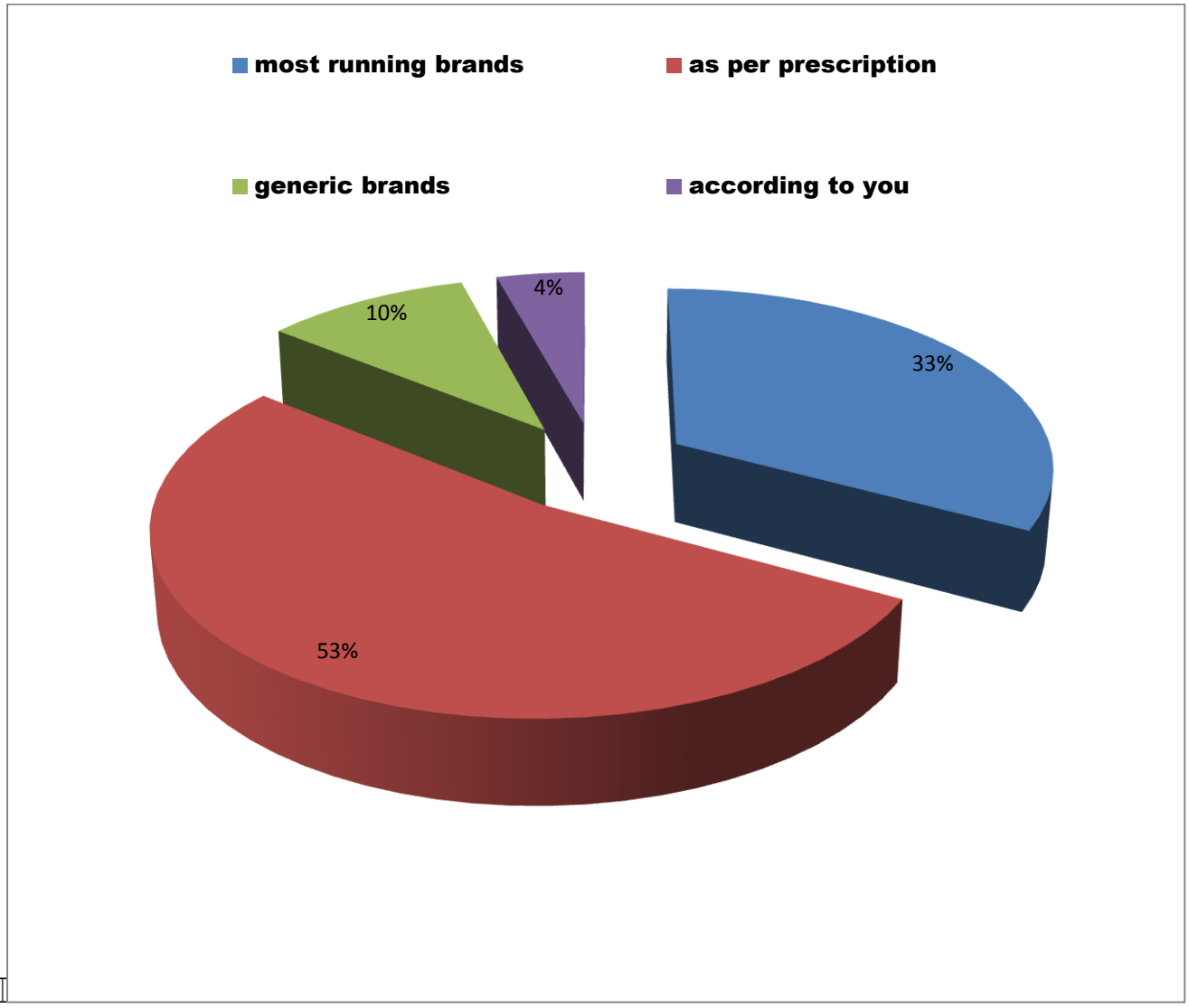
TABLE NO 7



As per the analysis of given above chart no 5 maximum 33 chemist had approx. 15 or more than 15 brands in there shop regarding hair growing /hair fall controlling, 17 chemist had at least 5, 11 chemist had 15 types of hair fall controlling brands, remaining 8 chemist had 20 or more than 20 types of hair fall controlling brands in there shop out of 70.

Total Respondents	Most Running Brands	As Per Prescription	Generic Brands	According To You
70	23	37	7	3

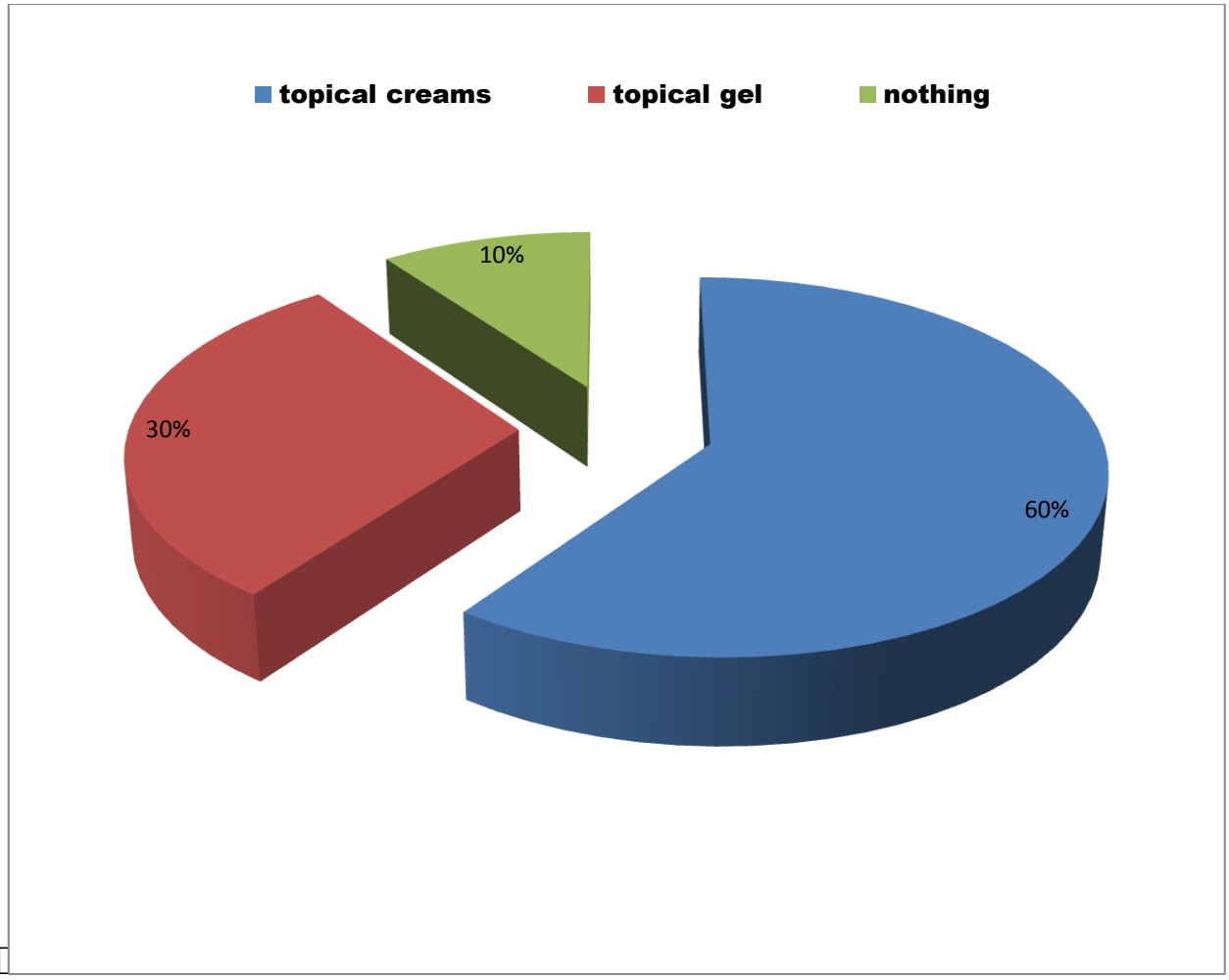
TABLE NO 8



As per the analysis of given above chart no 6, 53% of chemist gave the medicine as per the prescription to the patient, 33% chemist gave most running brand, 10% of the chemist gave generic brands & remaining 4% chemist gave according to them.

Total Respondents	Topical Creams	Topical Gel	Nothing
70	42	21	7

TABLE NO 9



As per the analysis of given above chart no 7 there are 60% of the chemist said that maximum topical creams were the substitute of acne controlling brands & hair creams, 30% chemist went with topical gel for acne & hair gel for hair controlling & remaining 10% said no any other substitute for acne & hair growing brands.

Chapter 8

8) CONCLUSION

- It is clearly shown by the study that market is very stiff and having lots of competition.
- ISOTROIN is the leading brand in acne controlling but other brands are also giving it neck to neck competition.
- TUGAIN is the second most preferable drug for the hair loss therapy but MINTOP itself covers a huge fraction of the market.
- Overall market is full of opportunities and having strong competition.

Chapter 9

- The identity of all chemists will be kept confidential.
- The data collected will only be used for study purpose.
- Irrational use of data will be prevented.

Chapter 10

□□□□ □□□□□□□□□

1. Simpson NB, Cunliffe WJ. Disorders of the sebaceous glands. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's Text book of Dermatology, 7th ed. Vol. 43. Blackwell Science; 2004. pp. 43.1–43.75.

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5. www.nhschoice.com - your health your choice

6. www.wikipedia.org-hair falling

Chapter II

□□□□ □□□□□□□

Q.1 how many prescriptions you have received in a day regarding acne controlling & hair fall controlling /hair growing brands?

a. 5

b.10

c.15

d 20

Q.2 who is the market leader in the acne controlling brand segment?

a. isotroin

b. isogold

c. isopril

d. deriva cms

e. retino-a

f. tretiva

g. acnecin

Q.3 who is market leader in the hair fall controlling/hair growing brand segment?

□. Mintop

b.Tugain

C.Hair for u

d.Gromane

e.Hygain

f.Lonitab

Q.4 how many brands you have in your shop regarding acne controlling?

a. 5

b. 10

c. 15

d. 20

Q.5 how many brands you have in your shop regarding hair fall controlling/hair growing?

a. 5

b. 10

c. 15

d. 20

Q.6 if there is any patient comes to you for acne medicine or hair fall controlling product than which bases you give them medicine?

A. most running brands

B. as per prescription

C. generic brands

D. according to you

Q.7 any other substitutes for these brands?

_____